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EDITOR

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EDUCATIONAL REVIEW

JUNE, 1906

I

THE CHANGING CONCEPTION OF "THE FACULTY" IN AMERICAN UNIVERSITIES ¹

I

The original faculty, and still the necessarily central faculty of Arts and Sciences,—the old "college faculty" with all that growth outward and upward has added—is as much as this short paper can sketch, even in bare outline. Within our generation it has greatly changed. It is our purpose to show not so much the history of that change as the present situation and some of its implications.

The living root of the old faculty, as of every other part of the college, was a distinctively Christian impulse. It was the belief that in serving the cause of knowledge and truth by promoting liberal education men were serving the cause of Christ. Presidents, trustees, and professors were alike to give themselves in self-denial to their several tasks, mindful that this holy ideal was to guide and ennoble their every effort. And the old root flowered many a time in lives of strength and loveliness that remain as the fairest memories of the older period. Yet perhaps the ideal was too high ever to be realized generally by men as men were and still are. Certainly it is an infinite pity that a narrow particularism, an insistence on the local and clannish, and a consequent sectarian warfare, somewhat mitigated by common sense and kindliness, so often dis-

¹ A paper read before the Association of American Universities at the Annual meeting in San Francisco, March 17, 1906.

figured the old college that its power for good was lessened. Let us make these abatements freely, and yet gratefully remember that the old college faculty at least professed and tried to show that God is the end of all our knowing and that Christ is the Master of the Schools.

With this ideal, then as now, the fiercely practical side of our American temper was found to be at variance. The sense of achievement in visible things fought against faith in the invisible. A nation had been made and kept together. Society had been "installed over a vast continent." We were free, as few peoples were, from such fearful dangers as poverty, famine, and invasion. Men could live free from fear. Careers were here for all who could make them. The elements of material good fortune were becoming ours beyond any measure known in history. And so the rival ideal of success, first in the outward and then in the sordid way, has been growing with our growth, feeding itself all the while on the old eternal human selfishness. It has, of course, been true at all times, and notably so in times of trial like the Revolution and Civil War, that the nobler side has asserted itself and that men in their thinking and doing "endured as seeing Him who is invisible." But the times of ease, plenty, and self-indulgence have not been friendly to the old college ideal, any more than they are friendly to the homely virtues of simplicity, clear sincerity, scrupulous respect for the rights of others, and modest independence.

Moreover, as is almost too obvious to need mention, and yet so clamorously important as to need sure remembrance, our whole life, including its educational preparation, has been getting more and more complex and tense. The individual counts for less and less. The aggregate, whether organized in corporate form or disorganized in wild, mob-like drifts of opinion and action, counts for more. To keep pace with our progress, to master the material of our lives so that the individual shall not be overwhelmed and crushed, some sort of organization becomes more and more imperative, if only that each man may have a fair chance to get his own good by cooperating and sharing in the common good. And out of this state of things has come an impatient message to our larger

universities first, and then to the lesser ones. It is that efficiency must be our watchword (and catchword), that education is a business, and that universities are corporations like banks, railroads, factories, department stores, and insurance companies. Notice is being served that if our university faculties do not conform to this notion, they must give way to faculties that will. This is the message. What have we to say about it?

II

Let us make some admissions. First of all, there has been a great deal of folly talked about the freedom of faculties and of individual professors. Would that the fact a man is a professor were sufficient proof that he is also a man of sense! Sometimes it is not even proof that he is a scholar. Before we talk of larger freedom, we must be sure in a given case that the individual professor, and in each faculty at least the strong majority, is fit to be free—that is, sure to serve well the one supreme end for which professors and faculties legitimately exist. That end is intellectual and moral freedom, not for the professors alone, but for all others with whom they come in contact. It is a case where reciprocity is the only protection.

And so the actual assumption of responsibility for using this freedom well must come in to prove a man fit to be free—to temper the judgment, to make us wise in counsel, considerate in action, tactful in winning men, swift to help and slow to harm the university we represent. If no professor proposed a resolution in faculty, I will not say unless it were sensible, but unless he were man enough to see it thru in execution, taking the blame for failure, and letting whoever would do so lay claim to the glory in case of success, we should then see a faculty undeniably fit for the widest freedom—an irresistible engine for the best work. So, too, if no professor coveted notoriety or lowered the academic tone of his lectures to attract attendance and applause, whether by exploiting some novelty or serving up the things of superficial charm to please idle hearers, how much more boldly could we demand more freedom for each as well as for all. Plain common sense, open-eyed

sympathy, tolerance, modesty, balance—these are some of the old, undramatic virtues needed as guarantees that the free professor or the free faculty will be beneficently free. And yet let us not admit too much in this connection, for the fact that American faculties are not stronger in these virtues, and consequently deserving of more freedom, is not first of all the fault of our faculties, but of the presidents and trustees who choose them, or else the fault of insufficient resources.

Secondly, we must admit that universities are corporations and that education is a business. Let us do so heartily. Is it not time we got away from hand-to-mouth living and rule-of-thumb reckoning, and recognized that business has its laws, and that experts must conduct it? Under American conditions the management of a large university requires some stable corporate base in the form of trustees or regents, and one executive head, a president. Unless we are to go wavering and drifting, the primacy of president and trustees must be maintained. We cannot in this imitate any old-world system.

It is an immense gain that most of our universities are now so well managed on the business side. The wisdom of their investments has made more than one university treasurer's report a guide to prudent investors outside. The very complexities and annoyances in the terms of gifts and endowments, the variety of accounts and securities, and the calculation of probable revenues on less certain bases than many business enterprises possess have evoked surprising wisdom. The net result has been that our leading universities, so far as their hampering conditions permit, usually make every dollar do its work. Would any man in his senses suppose that American faculties could or would do as well?

Then the same corporation must use business sense in creating and maintaining a faculty. The best professors procurable for the terms that can be offered, selection and promotion on recommendation of the president, and the unifying of educational policy by means of the same sole executive head, are necessities of our situation. In all this our universities have been learning the lessons of modern business efficiency.

III

Nevertheless, if this is the sum of the proposition that university education is a business, our faculties are in a bad way, because it means the destruction of their intellectual and moral freedom by reason of the substitution of commercial for academic standards. That this is the chief menace at the present time to the self-respect and usefulness of our professors and faculties must be evident to all who know them. It is, of course, quite possible that we are in a transitional period, and that our faculties are moving with an inevitable trend of events. That, however, remains to be seen. But if it is so, we may be sure of one other thing, and that is a progressive impairing of academic standards and an ensuing degradation of our faculties to the condition of mere employees. So far as this happens, universities cease living and begin dying. To avert such a result, or even the slightest menace of it, must we not then fight again the old fight for our academic birthright, and take part anew in the μάχη ἀθανάτου for a reasonable freedom, intellectual and moral, personal and collective. Can university professors who are men give any but one answer to such a question?

The trouble with the theorem "education is a business" is that it is only a preliminary half-truth—the half-truth which, however, fills the eye and mind of our business men. The truth in it is that business method is the means, but not the end, of education. The other and better half is that "the business of a university is education"—the half which makes the first half valuable. And while the trouble in professors is that they are too often pitifully ignorant of the wholesome laws of business, the mate to this fact is that the business world is almost wholly ignorant of the laws of education. "Your plant is idle in the summer," said a British manufacturer to an Oxford professor. "You ought to put on a shift of men for that job." "The trouble with your plant," said one of our captains of industry lately, "is that your output will not stand business tests. Every boy you graduate ought to be your standard finished product. Otherwise, you should discard him

early in the course as waste." "Suppose it happens to be your boy?" he was asked. "And suppose this sample of waste turns out later to be a valuable by-product, or even the real thing? What then?" His answer was a prompt and creditable "I don't know." The region of his ignorance included the domain of college education. If, then, it be true that the very training which makes a man a professor dims his business faculties, is it not fully as true that the training which absorbs the life of a business man blinds his educational perceptions? How else, then, can this conscious or unconscious antagonism be mediated, except by recognizing that each has a lawful hemisphere? The hemisphere of business is secure enough from invasion, but for the hemisphere of education we badly need a new Monroe Doctrine.

Let us stick to our text, that the one business of a university is education. It will then be clear that the character and extent of business methods allowable in conducting a university must be governed by the kind of business to be conducted. It will also be clear that while the trustees or regents must strive to hold the university faithful to its trust and to secure what will make it efficient in its every part, the faculty alone is the body capable, or to be made capable, of the conduct of all educational business according to educational standards. The first dangerous invasion of commercialism is naturally made upon the corporation, the body which connects the university with the outside practical world, the body which is, therefore, most accessible to attack. One and another trustee in the laudable desire for efficiency is apt to think first of the efficiency with which he is most familiar, the efficiency of the bank, the railroad, the business house. Under this impulse he unconsciously veers away from the academic point of view. Soon others turn away; enough to make a working majority, and, naturally, the first point of common convergence is in centralizing the deliberative, as well as active, functions of the university, including much of the proper business of the faculty, and even of the trustees or regents, in the person of one head officer—the president.

I believe most firmly in high powers and, in grave emergen-

cies, irresistible powers for every university president, in quick control of everything at short range. But that is one thing, a safe and wise thing, provided always it is done in the environment of open inspection, quick accountability, close participation of all competent members of boards and faculties, and the most scrupulous jealousy in maintaining for every one the utmost freedom of initiative, both in speech and action, that can be used with loyalty. Otherwise, so far as sharing in the common business goes, and so far as personal usefulness is concerned, we make boards and faculties personally and collectively less efficient for the very end they are created to promote, and not the advantages, but the abuses, of the business world are ominously repeated in the form of "dummy" trustees and "dummy" professors. .

IV

The profound change, then, now in progress in our American faculties is in the relation of the faculty to the president. The tendency, borrowed from the business world and increasing with the number of persons in the faculty, is toward individual and collective dependence on the president. And yet, so far as this does not curtail the self-respect of honorable professors by abridging their freedom to teach what they really believe, or to take part fully in the business of the faculty without prejudice to their standing or livelihood, even if they do not happen to agree in one or another important matter with the president, then, whatever is to be said against this increasing dependence as a danger to efficiency, it cannot be criticised as an attack on personal freedom. And it is here we think the test should be found as to what constitutes a professor's reasonable freedom. For, after all, the university must pull together, or it will pull apart. And, tho the head be not the whole body or the major part of the body, the academic body, like the human, must have a head, unless it is to be a lifeless trunk, and only one head, unless it is to be a monstrosity.

Is there anything, then, that needs to be suggested in order that the faculty, keeping to its own function and showing loyal deference to its head, may be kept from deterioration as the

sole organ whose function it is actually to conduct university education efficiently? Let us examine some of the suggestions that have been made:

1. That the president, as the responsible head, should initiate all important measures of educational policy. This means that he initiates such measures, either alone, or by putting them in operation by the action of the corporation, and thus imposing them on the faculty, or by introducing them in faculty after shaping them in conference with a committee of the faculty, or by proposing them first in open faculty. There is something to be said for even this extreme view. It is that the university has one clear policy, and that the president has untrammelled opportunity, with practically exclusive responsibility, for doing whatever he thinks should be done. Let us take a daring step and go so far as to say that there may be momentous occasions when the president must "go it alone" or face an absolute *impasse*. Let us trust such occasions may not occur, nor even occasions when the corporation and president may come to feel they must join to impose unwelcome laws on reluctant faculties. Such situations merely argue a university to be in a very bad way.

Introducing measures of policy after shaping them in a committee or department does of course recognize that there is value in expert counsel, and introduction in open faculty recognizes and welcomes the help and advice of all. These are natural methods for any president who wishes his policies to be understood by his colleagues, and the latter method is the one which insures the most cordial assent and, in the long run, the greatest efficiency, tho it must be confessed the penalty is sometimes the long-suffering endurance of professors who "darken counsel by words without knowledge." When the first reference of a measure is made from the faculty to its committee for digestion and formulation, rather than by first reference of measures in predigested form from the president and a committee to the faculty, both the sense of freedom and of responsibility are quickened in the minds of the faculty as in no other way. Yet, whichever of these various modes the president may use, the general thesis that the president should

initiate all important measures of policy has more against it than for it. Every measure thus proposed becomes an administration measure and seems to challenge at the outset the loyalty and security of every one who may not be able to agree with it. In such circumstances, the free utterance of real opinion, unless it happens to be in substantial accord with the measure proposed, becomes almost impossible. Self-criticism is one of the necessary educational functions of a university, in order that all its measures may have the preliminary test as to whether or no they are well considered on all sides and will work well when put in operation. Whenever, for any reason, the atmosphere of a faculty room is not friendly to this free utterance, the results are sure to be disheartening. Some professors will develop a cynical disregard of their duty to speak what they think, the weaker ones will be constrained to evasion, or even official hypocrisy, and all will exhibit in varying degrees a loss of interest in the welfare of the university, except in so far as their own personal fortunes are affected. This turns professors into place-holders and place-hunters. The logical end is the destruction of responsibility, and consequently of interest, on the part of the faculty in the important measures of policy on which the higher welfare of the university depends. Need it be added, by way of warning to those who believe in subjecting universities to the standards of the business world, that a faculty thus circumstanced is bound to become increasingly inefficient, and also unattractive to the best professors?

2. There is the suggestion of dual control by the president and faculty. This seems to me worse than the former; for, if the one seems to spell autocracy, the other spells weakness and discord. In case the president is a strong man, it means ceaseless friction between him and an oligarchy of professors. If he is a weak man, it means the presidency is reduced to a chairmanship by courtesy. In either event, it means structural weakness in the university and an unsteady attitude which keeps producing trouble inside and distrust outside.

3. Some may, perhaps, favor the idea of faculty ascendancy. For us, Oxford and Cambridge are its best examples. The professors there are virtually their own trustees, and they

choose their own vice-chancellor. The plan has one very great advantage—personal freedom in a higher degree than is known in our faculties, or even in Germany. But let any one who would introduce it here remember the abysmal differences that yawn between that situation and ours. Oxford and Cambridge are indeed more democratic in the matter of professorial freedom than we are. But it is a democratic freedom that rests upon an aristocratic presupposition, a freedom of the professorial caste resting on a tradition sanctioned by centuries of privilege, checked and counter-checked by the balancing of intercollegiate rivalry, and issuing in restriction of all initiative to a small council, elected, to be sure, but so constituted as to be changeable only very slowly. Admirably in accord as it is with the stable and soberly balanced love of liberty, “broadening slowly down from precedent to precedent,” that has made England great, it is not a faculty model that can be produced here. But may it never perish there!

4. There remains to be considered what can be done under our own conditions to invigorate and perfect the faculty, not only to save it from the subtle poison of commercialism, but to make it do its educational business efficiently, with full self-respect and in sure harmony with the president and corporation. I believe the one thing to be done is to revive in full power the democracy of the faculty, with its free president honored supremely and followed steadily as the one natural, as well as official, leader of free professors. Only by following this path shall we be enabled to avoid the rank commercialism which believes in its heart that a university is something like a store where the trustees are the proprietors, the president the manager, the professors the employees, and the students the capricious customers.

And here we have to stop a moment to notice a futile remedy that appears in many forms. It is the remedy of committees and departments and councils and senates. We are organized to death. It is the “worship of machinery” all over again. Of course, these things have constant and even indispensable uses. Of course, we must know where things are, or we shall never find them. For the routine business, the ever-recurring

humdrum task, the mechanics and economics of our work, we shall always be needing these things—but always as our servants, never as our masters. If, behind the complex of our committees, we do not have the watchful criticism and active coöperation of the whole faculty,—if the faculty does not really understand what its agents are doing, or what their measures mean,—then the committees are virtually the faculty, and the faculty becomes little more than a listless and dwindling audience. This may possibly do well enough for routine business, but never for the understanding or coöperative execution of a great policy. For, unless a faculty actually controls all its parts and agencies, it cannot do its business in the best way, nor can it long maintain its just freedom.

Let us face the situation. American faculties are weaker than they ought to be, so far as concerns their power to maintain educational standards and to perform their own educational business. Their great growth has called for better organization, but organization has progressed too much without regard to the fact that the object is not organization, but education. The greater centralization of functions in the president, with all its advantages, has been at the expense of the free and proper exercise of the functions both of faculties and corporations. But this is not all. The decline of the old college ideal, which involved as one of its corollaries a definite liberal education by means of a few common studies of central importance, has been profoundly influencing the character of our supply of professors. Less and less emphasis has been placed on the general make-up of the man, and more and more on his specialized knowledge. The destructive theory that a professor is solely a teacher or investigator, and no longer a whole man, has shorn him of a priceless part of his academic citizenship. This view has been followed by its sequel, that the professor is concerned only with his specialty. And so not only have we been acquiescing in the view that his intensive special knowledge of one subject, or part of a subject, is properly accompanied by an extensive general ignorance of other subjects, but we have been cheerfully accepting professors who are almost totally blind in regard to the affairs of uni-

versity education. Professors have been going by such differing paths of preliminary training into their several bypaths of special study that they are not only getting far apart intellectually, but find they have no one common ground to which they may ever return and meet in full fellowship. It is the very satire of our history that, along with centralization of the presidential functions and the constitution of elaborate machinery to keep things working together, there has been a corresponding dispersion, from another cause, of the men who most need to stand constantly together in counseling for the best good of their universities. This must be changed, if our faculties are to consist more and more of men of all-round ability, men who are able to see and fit to solve larger questions with the moderation of wisdom. This means a renewal and better realization of the old college ideal which aimed to turn boys, not first of all into merchants or bankers or lawyers or professors as such, but into well-balanced, self-directing strong men. If this standard shall be restored to its primacy, we shall see in operation a force indispensable for the production of professors who are fit to be free. Meanwhile, recognizing the full rights of all parties involved, and recognizing further the need of beginning without delay, the all-important thing just now is to revive in vigor the democracy of the faculty. This means that it is the duty of every member to take part and make his voice heard in the business of the faculty, without arrogance and without fear, until such time as it becomes clear to his colleagues that he is not fit. Then he should subside. How shall we ever be educated as faculty members, unless this attempt is made? There will be some time wasted. Unwise suggestions will find utterance. They will meet with their natural corrective in the criticism of others. It will be well worth while. One priceless result will be that whatever the faculty does will be its own free act. With this will come the sobering influence of responsibility, to make all men who are not without sense use their liberty sensibly. Other good things will follow. A living tradition in things intellectual and moral will be established, a self-renewing tradition that will enable the university to exhibit to the world with some show of definite-

ness and continuity the ideals for which it stands. These are the only traditions that have a chance to outlast the men who make them.

To this end, committees and executive officers, such as deans, heads of departments, and chairmen, should really be the choice of the faculty, even tho the president names them. All committees and all officers used by the faculty in its service should be accountable to the faculty, and their reports and proposals should be freely debated.

But what, it may be asked, is to happen in case a faculty and its president do not agree? A presidential veto is no remedy here. So far as I can learn, it has never been used with satisfaction to any one concerned. What then? I see only one way. If, after debate, a faculty persists in its action, the right of the president, on recording his dissent, to take the whole matter for review to the corporation should be a matter of course, and unless the faculty is overwhelmingly against the president, a wise corporation will usually sustain him. But nothing will have been smothered. The voice of the faculty will have been heard, and responsibility will be placed on the president and corporation, where it belongs. Contrariwise, if the president accedes to some faculty action he does not approve, but does not think needs to be taken to the corporation, then again the responsibility is placed where it belongs. If it turns out that the action of the faculty was wise, the responsibility is rightly placed on the faculty, and the president wins approval for his considerateness. If it turns out that the action of the faculty was unwise, then again the responsibility is rightly placed on the faculty and the president's opinion gains new weight. We do not need more machinery. We need this common understanding. It will make steadily for justice, peace, freedom, and efficiency.

No university ever acquires true grandeur unless its faculty is made up of free men. No faculty discharges its duty happily and amply unless it is entirely free to propose and debate what it thinks right, and finally, no self-respecting faculty will do other than help its president, whether it happens to agree with him or not, so long as he devotes himself faithfully to his

arduous task. That task is to promote among his colleagues, his students, and all whom his university can influence, the intellectual and moral freedom of men. And so I return to the opening thought: The old college ideal is the true one. We need it more than ever to save our universities—presidents, trustees, professors, students, and alumni, and all whom they can influence—from the degrading personal and official servility that comes from commercializing our higher education.

ANDREW F. WEST

PRINCETON UNIVERSITY

II

SIMPLIFYING OUR SPELLING¹

There is an old story of a Quaker who was present when a sudden misfortune befell a poor man, and when the bystanders were loudly expressing their pity. The Quaker listened for a little space to these sympathetic protestations, and then he turned to the person nearest to him and asked a pertinent question: "Thee says thee pities him. But how much does thee pity him? I pity him five dollars."

For many years almost every one who has given thought to the English language has bewailed loudly the present condition of its orthography, which is inaccurate and inconvenient, misleading in itself, and wasteful of time and money. Reformers have come forward with all sorts of schemes, and associations of scholars have made ineffectual recommendations. Circumstances happened to intensify the rooted conservatism of the two peoples who have the English language as their birthright, and the needed improvements in our spelling seemed no nearer at the beginning of the twentieth century than they had been in the middle of the nineteenth. Then Mr. Carnegie followed the example of the Quaker, and gave practical expression to his emotions. At his suggestion a Simplified Spelling Board has been organized, and he has undertaken to supply the sinews of war for an active campaign in behalf of a more reasonable orthography.

The growth of the two nations who speak English is one of the most obvious and one of the most remarkable facts of the nineteenth century. Five hundred years ago English was spoken only by the few millions who inhabited the British Islands. Today it is the language of two great empires. The number of those who now speak English is greater than the

¹ Reprinted by permission from *Harper's weekly*, March 21, 1906.

number of those who now speak German and French and Italian added together, and the rate of increase is also larger. If this rate of increase continues, the hundred and thirty millions who have English for their mother tongue in the first decade of the twentieth century will have swollen, in the last decade of this century, to five hundred millions. English bids fair to be the world language of the future, as French seemed likely to be two hundred years ago, and as Latin actually was two thousand years ago.

To be the fit instrument of universal civilization, English is singularly apt, in that it is an easy language to acquire by word of mouth, since it has got rid of the grammatical complexities which still encumber most of the other leading modern languages. It is not quite the grammarless tongue that it has been called, but it has far less grammar than any of its rivals. Its one striking inferiority is in its orthography. The spelling of English is unworthy of a practical race. It misrepresents the derivation of the words; it is wholly unscientific; it is as wasteful as it is absurd; and it is inferior to the spelling of French and of German, and far inferior to the spelling of Italian and of Spanish. No better example could be found of the inconsistency of human nature than the fact that the most business-like of races has been so long content with the most unbusiness-like of orthographies.

And yet, however wasteful and archaic and ridiculous English spelling may be, any attempt to alter it violently is foredoomed to failure. The English-speaking race is essentially conservative, and it declines to be driven too fast. It will resolutely refuse to give up the symbols to which it is accustomed. For this reason, if for no other, any scientific phonetic reform is absolutely impossible; it lies outside the sphere of practical politics. This is a fact that certain earlier enthusiasts failed to recognize; and as a result they were able to accomplish little. But altho phonetic reform is impossible, even if it was wholly desirable, improvement of some sort is possible, if too much is not demanded too suddenly. Indeed, improvement has been going on ever since the users of English began to pay attention to their spelling.

This improvement has been along the line of least resistance. It has consisted chiefly in the effort to make the spelling of a word conform to its sound by the omission of those silent letters which were plainly useless. Thus *musicke* has been reduced to *music* and thus *tragædy* has been reduced to *tragedy*. Thus, at the present time, readers are being made more familiar with the curtailings of *program* and of *catalog* and of *tho*. *Music* and *tragedy* are now accepted by all; but there was a time when these two words were as strange to a majority of readers as *prolog* and *altho* are to many of us today. These are but specimens of that simplification by omission of which there have been thousands of instances in the past, unwelcome once, but used now without objection. And thousands more are awaiting adoption—*ryme* or *rime* for *rhyme*, for example, *aigret* for *aigrette*, *hemorrhage* for *hæmorrhage*, *esthetic* for *æsthetic*, *maneuver* for *manœuvre*.

To hasten along the improvement of English orthography by urging the omission of useless letters, this is the practical task which has been undertaken by the Simplified Spelling Board. Simplification by omission—this is its platform; this is its motto. It is not an innovation; it is not a new principle; it is a principle which has been at work for centuries; it is a principle the application of which will arouse the least possible resistance and produce the most immediate results. To call attention to this principle will be the first duty of the Simplified Spelling Board, and to urge every user of the language to apply the principle for himself at his own convenience and to whatsoever extent he himself may see fit. To this simplification by omission and to a host of words simplified in accordance with this principle the Simplified Spelling Board proposes to lend the weight of its authority—of the authority of its several members.

It is a consequence of our regard for the common law that we like to rely on authority, and that we like to be assured of the precedents for our actions. In matters of speech we turn to the dictionary for guidance; and among the members of the Simplified Spelling Board are the editors of several of the foremost American dictionaries. In matters of science we look for guidance to the officers of our universities; and there are on the

board representatives of half a dozen of our leading institutions of learning. In matters of usage we like to be guided by the practice of men of letters; and certain of the foremost authors of America have accepted election to this body. In matters subject to dispute we desire to hear the opinion of the public press; and on this board are to be found the editors of periodicals of high character. And in matters of practical business, we look to the practice of men of affairs; and there are also business men on the Simplified Spelling Board. The membership is not yet complete, but it now includes Chancellor Andrews of the University of Nebraska; Justice Brewer of the United States Supreme Court; President Butler of Columbia University; Mr. O. C. Blackmer of Chicago; Mr. Andrew Carnegie; Mr. S. L. Clemens (Mark Twain); Dr. Melvil Dewey; Dr. Isaac K. Funk, editor and publisher of the *Standard Dictionary*; Mr. Lyman J. Gage, ex-Secretary of the Treasury; Mr. Richard Watson Gilder, editor of the *Century magazine*; Dr. William T. Harris, United States Commissioner of Education; Professor George Hempl of the University of Michigan; Colonel Thomas Wentworth Higginson; Mr. Henry Holt; Professor William James of Harvard; President David Starr Jordan of Leland Stanford University; Professor Thomas R. Lounsbury of Yale; Professor Francis A. March of Lafayette; Professor Brander Matthews of Columbia; Judge Morrow of the United States Circuit Court, California; Dr. Benjamin E. Smith, editor, and Dr. Charles P. G. Scott, etymological editor, of the *Century Dictionary*; President H. H. Seerley of the Iowa State Normal School, Cedar Falls; Mr. Charles E. Sprague, president of the Union Dime Savings Institution; Professor Calvin Thomas of Columbia; Mr. E. O. Vaile, lately editor of *Intelligence*; Dr. William Hayes Ward, editor of the *Independent*, and President Woodward of the Carnegie Institution of Washington.

This new body is not an irresponsible collection of cranks and of faddists; it is a representative committee of American citizens, who believe that the time has come for an organized effort to make English a more fit instrument for the hundreds of millions who are soon to use it. They are practical men,

who propose to work without haste and without rest, not asking too much, but gaining here a little and there a little. They are determined, above all, to awake public interest in the necessity for a better orthography. They propose to call attention to the many words in regard to which usage is unsettled; and they intend to urge the adoption of the simpler of the two forms. Perhaps most of us are in the habit of writing *blessed** and *stripped*, but we are not unfamiliar with *blest* and with *stript*, older forms, preferred by not a few of the poets. Tennyson liked to write *crost* and *dropt*; and Lowell and Landor had each of them similar likings for the older and the simpler form. Perhaps the English spelling that was good enough for Tennyson and for Lowell may be acceptable to other less-gifted writers.

The Simplified Spelling Board will try to make everybody understand that there is not now and there never has been any general agreement as to English spelling, or any authority having the right to lay down any rules for it. There is divided usage now in regard to hundreds of words, and there has always been divided usage. There is no special sanctity in either *musicke* or *music*, *æra* or *era*, *toilette* or *toilet*, *phantasy* or *fantasy*, *sovereign* or *sovrän*, *comptroller* or *controller*, *pædagogue* or *pædagog*, *technique* or *technic*, *plough* or *plow*, *though* or *tho*. Every one of us has a right to his own opinion; if he prefers cumbersome complexity, he can have his own way; and if he would rather employ the briefer and more direct spelling, he is within his rights as a human being.

The existing diversity of usage is far wider than those suppose who have given no attention to the subject. Various bodies have resolved to adopt such simpler forms as they themselves desired. The United States Government has a board on geographical names, which has cast out many needless letters, spelling *Bering* Strait, for instance. The National Educational Association some years ago formally adopted a list of twelve simplified spellings, including *program* and *catalog*, now widely familiar, and *tho* and *altho*. The American Association for the advancement of Science decided years ago to omit the final *e* of certain words where its retention served

no useful purpose; and this is why we find in scientific writings *morphin* and not *morphine*, *antitoxin* and not *antitoxine*.

To urge the adoption of the simpler of two spellings now contending, and to advocate further simplification by the omission of other useless letters, these are the immediate aims of the Simplified Spelling Board. And it purposes to employ all the usual machinery of a reform movement—a central office in New York and an organizing secretary. It expects to conduct an active campaign with pamphlets and with addresses.² It hopes to win over the support of organizations in sympathy with progress, of teachers and of advertisers, of publishers and of printers, of men of science and of men of affairs, of all who are awake to the immense waste of time and of effort due to our present spelling, and who can see how much of a hindrance this is to the speedier adoption of English as a world language.

BRANDER MATTHEWS

COLUMBIA UNIVERSITY

² Its publications will be forwarded to any one who will send a postal card of inquiry to the Simplified Spelling Board, 1 Madison Avenue, New York.

III

THE EDUCATED MAN¹

If I am asked to define an educated man, I should say that I mean by that term a man whose intellect is trained to coöperate in the purpose of human progress; and I fancy that, if you come to think about it, you will see that not much else than this, and not much less than this, is what you mean by an educated man. It is only to put the same thing in other words, to say that an educated man is one who consciously and deliberately holds an intellectual ideal of what he himself and other men are capable of becoming, and who has, in some measure, the knowledge and the skill to put this ideal into practice. Thus you see, according to my definition, a man may know how to read and write and do sums, and still not be educated. He may read the sporting news, and even write to the newspapers, but, if he takes life as he finds it, if he is content to live from hand to mouth in his business and his pleasure, if he is without an intellectual ideal, consciously held and deliberately striven after for himself and for his kind, I do not call him educated. Education means the holding and the striving after an intellectual ideal. Or, in the higher region, a man may be a specialist, with an acutely trained and perfected faculty, but, if he has not a general ideal enabling him to give his special subject its place in human progress and human life as a whole, he remains a trained specialist rather than an educated man. Or, once more, a man may have ideas, but he may be so far from any right knowledge of what human history is, or what the world is, that he has no power to correlate his ideas with reality, and his ideas remain chimeras. An educated man, I repeat, is a

¹ An address delivered to the members of the Birmingham and Midland Institute by the Right Rev. Charles Gore, D. D., D. C. L., Lord Bishop of Birmingham, President of the Institute. Reprinted from *The School world*, March, 1906.

man whose faculties are trained to coöperate in the law of progress.

What departments of knowledge or thought are necessary to make what in any real sense can be called an educated man? First of all, an educated man must know something of history. An Englishman must have some real idea of how this country of ours came to be what it is, of the races which compose our British people, of the various invasions from without which have infused strength into it, of the influences and the struggles which have given us, first, unity, then liberty, then wealth, then empire. But also we must have some standards of comparison. It is not enough that I should know, in some outlines of reality, the history of my own country. I must know, in a measure, how other races have, in the past, attained a foremost position in the world, and then for more or less assignable causes have lost it. An educated man is a man whose faculties are trained to coöperate in the law of progress. He must know, then, how in fact a man, or Englishman, has advanced to become what he is. But he must know also how men of other races have advanced in the past to positions of preëminence and of power like ourselves; and how, in the past, positions like that, once won, have been lost, and by what causes. You perceive my meaning? Progress is a precarious thing, a thing that depends on coöperation with certain laws, physical and moral. The educated man is one who can coöperate in such a law of progress because he has some more or less accurate ideas as to the way in which men in the past have become great and have declined. Or, once again, he must have certain ideas, more or less distinct, of the different kinds of civilization which, in the past, have come into being among men—of the chief civilizations, at any rate. He should look back and know that there once lived a Greek race which brought into being a city life of wonderful intensity and brilliant intellectual distinction, and how, when the Greek cities sank under the domination of other men, that intellectual race survived and spread abroad, and by their language and the diffusion of their character and thought influenced the whole world. And how another city, on the neighboring peninsula, the city of Rome, from a city grew to

be an empire, and gave the world ideals of government and of law. And a man should know something of the civilizations which, in much more recent times, reached their climax and decayed—he should know something of the splendid tragedy of Spanish civilization. And he should know something of what is happening in contemporary times in other countries, of what is the quite recent history of Germany or France. An educated man need not be a scholar. To get real and true ideas of human history, of the kind that I have described, a man need but read quite a few books if he reads the right ones. And, what is more important, having read a book, he turns it over and over in his mind, revolves it, and dwells upon it, until he has got certain principles, like hooks, in his mind, on which he can hang the variety of facts which, from time to time, come under his notice; and hold them together as illustrations which gain distinction and clearness in his mind, and guide his thoughts; so that he feels he knows something of the way in which men become great, and something of the way in which, having won their greatness, they can lose it.

Then, also, an educated man must know something of modern scientific method and achievement. I shall speak quite briefly about this department of education, for fear of making too apparent my own deficiency. An educated man need not be a specialist, or even an adept, in any single branch of science; but a man cannot be—in any tolerable sense—educated, unless he has got in his imagination and knowledge a more or less clear sense of what scientific inquiry has accomplished and is accomplishing. More than that, he must know, with more or less definiteness, what the method of science is; and that—I believe I am speaking the truth—he can only get by a systematic study of some one science, or, more imperfectly, but with some reality, from a careful study of some one or two really great scientific writers such as he can understand. The result of this kind of study to a man, who may be far short of anything that can be called a scientific man or an adept in science, is that the world, in his imagination, becomes the scene of great and constant forces which admit of being reverently explored, and so guided and directed that they may be made to minister,

to an almost indefinite extent, to human progress. You know, of course, Lord Verulam's great maxim—that sort of prophetic word by which he interprets so much that is greatest in modern scientific investigation—that “Nature can be controlled by being obeyed.” That means that Nature is a scene of great and constant laws which will laugh at you if you seek to violate or ignore them, but which, in proportion to the reverent study you give them, can be guided or controlled to infinite possibilities of human convenience, advantage, and progress. Well, thus the imagination of the educated man is enriched and enlightened; and the effect of this kind of conception, if it once gets hold of a man—not only of his mind, but of his imagination—is enormous. It lifts a man altogether out of that practical acquiescence in things as they are which is so enervating. It fires his whole being, possesses his whole outlook, with the idea of knowledge yet to be won, power yet to be acquired, transformations yet to be made.

There is one other region of feeling, and that the vastest, on which I will say a word also. I think a man may be educated in history and educated in science and still lack something, *vague*, but of extraordinary importance, without which a man can hardly claim to be called a really educated man. I think an educated man, by means of art, or music, or poetry, or by whatever means, must nourish in his soul a sense of the Eternal—a sense of that “which was, and is, and evermore shall be,” lying beyond all the changes in human history and natural progress—“the Eternal not ourselves,” in which we live and move and are, which is both beauty and power, righteousness and goodness. This transcendental emotion is not any definite creed; it is possible to the adherents of almost any conceivable creed: it is common to Herbert Spencer and Hegel, to Plato and Saint Paul: but without it a man is without something so essential to human worth that he can hardly be called educated. You know what it is, when you are worried, and occupied with the infinite details of life, and have the opportunity of listening to some great music, how slowly, if you can be quiet enough to surrender your spirit and lend a listening ear to the music, there steals upon your soul a sense of the

eternal harmony—something greater than the discords and the details of the life in the midst of which we live. Or, it may be that some single line of poetry, with its unspeakable truth, recalls you to the depths which lie in Nature. Or it may be by some work of art, only a little color and just the outline of some figures—a mother and a child—that, if you have got the quiet eye to look at it, there is smitten into your soul a sense of the eternal and fathomless beauty which there is in common things. Many are the channels by which to different minds sound and shape and color and motion impart and deepen the sense of the Eternal.

I have selected three elements in education : those that appear to me most essential to make up the character and mind of an educated man—those without which—without, 'I would say, each of which—I do not think a man can really be called educated. They are possible for most of us; they might be possible for all. We may all acquire some real knowledge of history, some real knowledge in one particular branch or department of scientific method and attainment, some cultivation thru music, thru poetry, thru art, thru Nature, of the sense of the Eternal, interpreting man and Nature in eternal aspects. I have had in view the education possible to an ordinary man, not a professed student. A man to become educated need not have time to read much if he read the right books. I would say to those of you who are young: You will probably live seventy years or so. Well, it is quite well to be prepared to live much less; but plan your life as men who will live for seventy years. Plan your intellectual life so. You cannot hope to become educated unless you lay out, and from time to time reform and remodel, a scheme of your educational life—a scheme of education for a lifetime; unless you write down questions to which you do not expect to be able to find the answer this year or next year, but of which you hope to get the answer ten years on. Plan your educational life as a whole, and then make steady progress year by year, and be very careful that you read the right books. If I had my way, I would have attached to every big public library a department of two or three well-informed men, who must be also sensible, who should have no other

business than that of advising students what books to read; because nothing in the world matters so much to a young man or young woman as to be put in the way of reading the right books.

I will say three words in conclusion. They shall be brief words. First, an educated man must have a standard of intellectual excellence. He must know what is first-rate—and you can only get that knowledge by reading the best books; and, I venture to add, by reading those which are not of your own time merely, but which have a certain remoteness and the character of established classics. Of course, he must read some books of poetry. Every now and then I come upon a person who, I think, really has never made any serious attempt to read any poetry at all. Occasionally it dawns upon me that they really are better acquainted with Shakespeare in Germany than we are in England. Well, besides poetry, there are certain books which mark epochs—which are full of great dominant ideas. The first book of Hooker's *Ecclesiastical polity*, for instance, opened to the English imagination the idea of law. Milton's *Areopagitica* fastened upon the English imagination the idea of liberty. Burke's speeches are full of the great idea of what government means. Now these are all books which are masterpieces of style. There you see what great thought is, wedded to the greatest power of language of which English is capable. I would say to any one who wants to be an educated man: Don't be satisfied without reading some of the greatest books in prose and poetry. And, I would add, the great romances. Don't be content without having read *Don Quixote* (which is a masterpiece, and also a classic in the English translation), and *Gulliver's travels*, and *Robinson Crusoe*, and *Pilgrim's progress*. I have not gone beyond England except in one case, and there, as I say, the translation is a classic, too. But an educated man ought to know some one language besides his own; and, I would add, apart from all question of its religious value, no man who would be educated ought to be content without being familiar with the Bible.

Then certainly an educated man, besides a standard of style—the sense of what is really great that is gained from reading

great books of classical standing—must gain an apprehension of what real knowledge is as distinguished from mere clever guessing or rhetoric. I think you might almost define education as a growing distaste for rhetoric. For example, a man who has read carefully and thoroly three or four volumes among the great works of Charles Darwin has gained a permanent possession for his mind. That is to say, he has learnt what real distrust of rapid conclusions means, real sifting of evidence, real scientific caution, coupled with a wide outlook. If he has done that, he will always be very distrustful of any one who begins a statement by saying: "I suppose it will be agreed on all hands." Indeed, I should like to say that whenever you hear any one say that, you almost take it for granted he is going to say something which is very doubtful. Or, again, you can get the same distrust of rapid conclusions, the same standard of strict inquiry, from books of history, from reading a writer like one of those who occupied this chair a few years ago—Dr. Creighton. Read his books, and you will be able to see what real love of truth is; how it sifts and discriminates, how unwilling it is to go by its own inclinations. The educated man has a power, a gradually growing power, of distinguishing between careful conclusions and large rhetoric.

And then, lastly, the educated man, tho he may, or must, have his own special line, and tho omniscience is the foible of only the very ignorant, yet must have some general sense of the unity of knowledge and of the place which his own special study holds in the whole of knowledge.

IV

THE TREND IN AMERICAN EDUCATION¹

The keynote of American life is democracy—social democracy. I say social democracy, because England is politically more democratic than the United States. On the other hand, England inherits conceptions of caste of which we know nothing. The English churchman prays to be content with that station in life in which Providence has placed him. On the other side of the water, schools for the poor are free; the rich must pay for their education. Hence the great preparatory schools of England, as well as the venerable universities, are for gentlemen's sons, and only gentlemen are wanted in the church, at the bar, or in the army and navy.

The founders of this republic thought it a self-evident truth that all men are created equal. The settlers of New England left the old world in search of religious freedom—to found a new home in which each might worship God in his own way. They were so intensely in earnest that they were willing to suffer for the faith, and so conscientious that they were willing also to make others suffer for differing with them.

They were stern men, those ancient fathers of New England, and they had little faith in the natural course of human development. Five years after the establishment of the Massachusetts Bay Colony they founded the Boston Latin School—"younger" and more vigorous today than at any time in its history. A letter written at the time says: "After God had carried us safely to New England, and we had builded our houses, provided necessities for our livelihood, rear'd convenient places for God's worship, and settled the Civill Govt.: one of the next things we longed for, and looked after, was to

¹ Address delivered at the exercises celebrating the founding of the College for Teachers, of the University of Cincinnati, November 21, 1905.

advance learning and perpetuate it to posterity, dreading to leave an illiterate ministry to the churches, when our present ministers shall lie in the dust."

Next, in 1640, they founded Harvard College—also "younger" and more vigorous than at any time in its career. Then, two years later (1642), they urged selectmen to see that parents provided for the education of all children to the extent of teaching them (1) to read, (2) to understand the principles of religion, (3) the capital laws of the colony, and (4) to engage in some suitable employment.

In 1647 the General Court of Massachusetts passed its epoch-making act providing for public instruction: "It being one chief object of that old deluder, Satan, to keep men from the knowledge of the Scriptures, as in former times by keeping them in an unknown tongue, so in these latter times by persuading from the use of tongues, . . . that learning may not be buried in the grave of our fathers in the Church and Commonwealth, the Lord assisting our endeavors, etc., etc. . . . It is therefore ordered" . . . that there be (1) one teacher for every fifty householders, to teach reading and writing, and (2) one grammar school when a town reaches one hundred families "to instruct youth so far as they may be fitted for the university."

From such a beginning has come our great school system, potentially the mightiest engine for good in our national life, actually the most expensive single department in our civil government. It should be noted, however, that in those early days "reading and writing" were the means of training the common man; the substance of his education consisted of religion, civil government, and suitable employment—all of them factors of every-day life in the home, the church, and the community. Until 1692 only church members were freemen and allowed to vote. Down to the nineteenth century there were no public elementary schools, as we know them. The schools that did exist were designed to fit boys for college, and the colleges were but stepping stones to leadership in state and church.

So it has been from the beginning of human society. Schools for leaders come first, because no society can long endure

that does not have capable leaders—leaders in the field and leaders in the forum. The masses of the people may be trained—and trained successfully, too—to maintain civil order and social stability by the institution of slavery, or bondage, or serfdom, or by social customs which impose class distinctions upon all. With leaders trained to lead and a people trained to obey, you have the prime factors in successful national life—successful, at any rate, from the autocratic or paternal standpoint. There is no call for universal education until in the course of human events men—individual human beings—have rights which cannot be denied them. Schools for the common people arise when it is recognized, for example, that each person has a soul to save, or when the form of government gives to each a vote.

The trend in American education for nearly two hundred years was to the advantage of those who were to be our leaders. There was first the Latin school, preparatory to college, and then the collegiate course preparatory to the ministry and to law—*i. e.*, leadership in church and state. Gradually American life began to demand trained physicians and engineers. Perhaps, in one sense, there had always been such a need, but consciousness of the need was not roused until the discovery of the manufacture and transmission of power thru steam some hundred years ago. A new era was ushered in with the nineteenth century.

1. A government guaranteeing equal rights had been firmly established, and the old causes for contention were thus removed.

2. Freedom of worship was assured to all. Denominational control of education gave way to state control.

3. Increasing immigration began to make for a cosmopolitan population. Life was growing more complex; less dependence could be placed on domestic training.

4. Advances in science led to a new industrial order. Before 1800 men could use only such power as they had in their own bodies, in domesticated animals, in moving air and running water. How impotent such means to the settling of the great West and the upbuilding of a great nation!

These are some of the influences which converted us, inside the confines of a single century, from a provincial and agricultural people into an industrial and commercial nation. The result was that the old education, however successful it may have been in producing great preachers and men of affairs, speedily became inadequate to meet the demands of an industrial and commercial age. A process of differentiation was soon noticeable within the college, and new professional schools sprang into being. Take, for example, the year 1850 as a turning point. Before 1850 we had in all some 10 law schools, 37 medical schools, 2 schools of dentistry, 3 engineering schools, 2 schools of agriculture and mechanical arts. We have since increased the number to 86 law schools (50 of these having been established between 1876 and 1900), 156 medical schools (86 established between 1876 and 1900), 56 schools of dentistry (47 established between 1876 and 1900), while engineering schools and schools of agriculture and mechanic arts are everywhere.

And the end is not yet. We are building rapidly schools for nurses, for artists, for railway superintendents, for architects, for housekeeping and homemaking, for journalists, and even for philanthropists. Then, too, look at the differentiation within the old groups. Medical schools are today professional or graduate, medical or surgical, allopathic or homeopathic or eclectic. Engineering has subdivided into civil, electrical, mechanical, chemical, sanitary, and so on thru the list as given by many of our great technical schools.

There is, as I have said, no end to this development, and there can be no end to it, so long as human needs increase or differentiate or become more complex. The greater the need of trained leaders the more positive the tendency to supply them. When we cease to grow and expand territorially; when our wants become fewer or our ambitions and susceptibilities becomes less keen; when we stop pushing onward—then you may confidently predict a period of ease and comfort and satisfaction with existing educational opportunities. But so long as the United States holds its place among the great world powers, so long as our states and cities have ideals to which they have

not attained, so long as individuals have ambitions which are not satisfied, so long will educational affairs remain unsettled and unsatisfying. The millennium which many school boards and some educators long for—that age in which the public will not ask for better schools and more of them, and when school superintendents and college presidents will cease to vex their teachers with requests to do some new thing—that millennium, I say, will mark the decline and fall of the great American Republic. It will be the end of a democratic fiasco in civil government, the bursting of the bubble which has tantalized European autocrats for a century with some semblance of reality, the end of the most stupendous failure the world has ever seen.

No, there can be no rest, no halt, even, in the progress of education. It is not something which can be stopped and started at will; it is not a tangible reality which can be fixed on a plate for microscopic examination at any time. It is a vital process, indissolubly bound up with our social and civil life. Once you catch it, or check its course, you will find in your hands merely lifeless clay, a cadaver, in which the vital spark is extinguished.

The trend in American education has been not only in the differentiation of professional schools, but also in the courses of study and subjects taught. I have no time to point out the changes that have taken place even within a generation in our American colleges and universities. Down to 1800 the entrance requirements to our best colleges were Latin, Greek, and some times a little arithmetic “as far as the rule of three”; and even in Latin and Greek scarcely as much as we now read in three years in a good high school. But between 1800 and 1870 eight new subjects were added to the entrance list, “whereas during the century and a half prior to 1800 the only addition of any consequence was elementary arithmetic.”

I have no need to remind you that the modern college offers far more than any one boy can take or should take. Hence the struggle over classical studies *versus* scientific studies, the establishment of “modern” courses, the device of multiplying Bachelor’s degrees, the elective system, and all that train of

controversies which have vexed the souls and spoiled the tempers of many, many college professors.

A survey of the field discloses much to be thankful for. We have made a fair beginning in our higher education—a beginning, I say, because there is not in this country today a college, or university, or professional school adequately equipped for the work it is attempting to do; there is not one of the great plants, however much they may cost the public for maintenance, that is being conducted efficiently or effectively, simply because the public does not yet appreciate the worth of the work they are doing or realize that the greatest economy in operation is impossible when defective machines and ill-paid workmen are put to a task that demands the best in everything—the best of equipment, the best of men, and the best of service. Some day, I hope, the American public will realize that our school system, from kindergarten to university professional school, is an engine so expensive that we cannot afford to keep it idle a part of the time, or run it except with its maximum load; an engine so expensive, too, that we cannot afford to intrust it to the hands of inexperienced or half-trained engineers. No business man would for a moment tolerate the waste and inefficiency in his affairs that we all know exists in education today.

I wish to push the indictment one step farther. Our educational system is not only wasteful and inefficient because it is operated at “low pressure,” but it is unfair in that it does not do what the founders of this republic meant that it should do. *It does not give equality of opportunity to all.* This may seem surprising, particularly as we have been boasting for a century of our American liberty, fraternity, and equality. It is the boast, too, of most Americans that our great public-school system—the greatest thing on earth—provides alike for every boy and girl taking advantage of it. This is half true—and dangerous, as all half-truths are. The fact is, the American system of education grants equality of opportunity only to those who can go on to the college and the university. It takes little account of the boy—and less still of the girl—who cannot or does not wish for a higher education. Those who “drop out” at the age of twelve or fourteen, compelled to earn a

livelihood, have missed their opportunity. But why? Do we in America have need only of professional men and "men of affairs?" Are those who pay the taxes and do the rougher work of life to be denied opportunity for self-improvement? Are only those who can afford to stay in school to reap the advantages of education? In a word, what are we doing to help the average man better to do his life-work and better to realize the wealth of his inheritance as an American citizen? These questions raise the problem of vocational training for those who must begin early to earn their living. It is, in my judgment, the greatest problem of the future, and one which we may not longer disregard and yet maintain our standing as a nation.

Altho we have consciously done next to nothing to give the average man a fair start in his life-work, unconsciously we have been putting forth efforts to meet his needs. A century ago the elementary school was the first step in the way to college. So it is today, but with this important difference: the curriculum of the old-time school was religion and the three R's. The time came when religion had to be put aside. That left the three R's—an impossible curriculum, notwithstanding the praises of some good people who do not think for themselves, but have an unquenchable desire to think for other people. You cannot read without reading something; and you cannot reckon without problems in something. The colonial schoolmaster, like the modern parochial schoolmaster, made religion the substance of his instruction. The modern advocates of the simple curriculum of the three R's must choose between the "three R's" directed to something and nothing at all.

The fact is, the moment religion was put aside something else had to come in. We put in English literature, history, civics, science, and music—in a word, the course was enriched. Yet the common sense of our American public insisted on further enrichment for the sake of those who needed a more practical training. Hence the introduction of drawing, manual training, cooking, and sewing—fads and frills, if you please, but nevertheless an honest (if unintentional) effort to accord to the great mass of our children vocational advantages similar

to those enjoyed by the few who could go on to higher grades of vocational training. It is precisely the same sort of development (from the simple to the more complex; from the general to the specific; from the purely disciplinary to the practical and vocational) that we have observed in the field of higher education.

But the end is not yet. The movement is only begun. The trend is unmistakably toward still further differentiation and still more complete adaptation to the needs of every-day life. The distinctive peculiarity of American education from the beginning almost to the present day is its *selective* character. Like the Scottish schoolmaster, we have rejoiced more over the one "lad of pairts" who somehow gets ahead, despite our instruction, perhaps, than over the ninety and nine who need our help. We boast of an educational ladder that reaches from the gutter to the university, and we see nothing amiss in making our elementary schools preparatory to the high school, and the high school preparatory to the college and university. In other words, that which few need all must take.

No other great nation that I know of thinks it worth while to train everybody for everything—and nothing!—and to do it at public expense. Germany has its great system of schools leading to the university and to professional life, and any boy who will may go forward as surely, if less easily, than with us. But Germany has, too, a system of public education which connects direct with practical life when the boy or girl leaves school at the age of fourteen. To be sure, it is little more than a beginning that can be made in training for practical life before the age of fourteen, but in the past twenty years astonishing progress has been made in supplementing the common school training and continuing it over a period of two, three, or four years after the boy has left school and while he is learning a trade. In making Germany a dangerous rival of England and the United States in the markets of the world, the continuation schools are doing quite as much by supplying the skilled workmen as the technical institutes and universities are by sending out engineers and scientific experts. If you want a chance to do some hard thinking and self-criticising, send to the Depart-

ment of Commerce and Labor in Washington for Volume 33 of the Special Consular Reports just issued (1905) and read that able treatise of 314 pages on Industrial Education and Industrial Conditions in Germany. If that does not provide food for reflection there is something wrong with you—or with me.

My conviction is that, instead of being satisfied with our school system in this country, we should be thoroly ashamed of it—ashamed not of our good schools and the good work that is being done, but ashamed that we as a people are being contented with so restricted a system of public education and so narrow a curriculum. We accept the politician's dictum that we are too poor to spend more than we do on education, when the fact is we are too poor to spend so little. More, much more than we now spend on education would be money in our pockets if only we knew how to spend it aright.

France, heavily burdened as she is, maintains in addition to her great system of elementary, secondary, and higher schools (including universities, professional schools, and schools of science) the following institutions for teaching the industrial arts:

- 1 National Institute of Arts and Trades.
- 1 Central School of Arts and Manufactures.
- 8 High Schools of Commerce.
- 1 Advanced School of Commerce.
- 1 Commercial Institute.
- 4 National Schools of Arts and Trades.
- 1 National School for Training Superintendents and Foremen.
- 2 National Schools of Watchmaking.
- 4 National Professional Schools.
- 26 Commercial and Industrial Schools for Boys.
- 6 Commercial and Industrial Schools for Girls.

In addition to the foregoing the municipal bodies of towns of any importance have opened professional schools for the elementary teaching of trades, industries, or arts (design, weaving, lacemaking, dressmaking, dyeing, electricity, book-keeping, and stenography). There are also numerous private schools and societies for the improvement of the artisan, which are well attended.

What France is doing is also being done—and done better in some respects—by Belgium, Holland, Denmark, Sweden, Switzerland, and England. In order not to over-emphasize our remissness, I will cite only one more example of a country which is poor and knows it—Württemberg.

“Württemberg is a country of 2,081,000 inhabitants, with a revenue of nearly ten dollars per head of the population. Besides elementary and secondary schools for all, it supports outright or largely subsidizes: one state university, Tübingen, of honorable history and, in some branches of instruction, of world-wide fame; one technical high school (practically a technical university), and one royal building trades school, both at Stuttgart; two special technical schools (Reutlingen and Schueningen) for textile and mechanical industries respectively; three weaving schools, two weaving workshops, and one knitting school, scattered about the kingdom; 231 industrial improvement schools in towns and villages; improvement courses wherever they can be justified by the attendance, providing special instruction for braziers, joiners, painters, metal-workers, bootmakers, etc.; 18 improvement schools for women in which serious instruction is given with a view to preparation for household management or independent industrial occupation; one fully equipped commercial college at Stuttgart, and two commercial improvement schools, at which instruction is given, morning and evening, outside of business hours; one elaborately organized agricultural high school at Hohenheim, and numerous farming schools thruout the country; one art school, and one art trades school for the training of artistically skilled workmen in branches of industry connected with art.”

There are two sufficient reasons for our not following Europe's lead: (1) we don't want to, and (2) we don't need to. We don't need to because life in this country is still easy. It isn't half settled yet. Some day we shall have five hundred millions here. I suppose we have land enough, and land good enough if tilled properly, to support a population ten times as great as that we now have. But even fifty years from now, at our present rate of increase, we shall begin to appreciate

what competition means. What will it mean when necessity compels us to use at its best every square foot of land we own? Then the man who will not work surely may not eat. And if he would preserve American traditions of decency and competence, he must work harder and more effectively than the man of today has to work.

It must be obvious to any fair-minded student of our educational system that we are doing next to nothing either to ward off threatened dangers or to prepare for those which are bound to come in future. Instead of doing the practical thing we, a so-called "practical" people, are content to produce "cuteness." The business world expects every man to do his duty—but it is very obvious that his first duty is to hustle and to get results. I once heard a colored preacher in the South illustrate the spirit of the age in this wise: "Once we measured time by grandfather's clock, which said, 'Ever—forever, never—forever'; nowadays we use a Waterbury, which says, 'Git thar—git thar.'" Our aim is to "git thar"—in our college sports, in professional life, in business; everywhere we count on winning, honestly, if possible; dishonestly, if necessary, and if the chances of getting found out are not too great.

Contrary to the findings of some critics, I believe that our schools are partly responsible for confirming us in our besetting sins—not by what they teach, but in the prevailing methods of teaching. The fact is, we do look for results and are not over-particular how these results are obtained or whether they are just right or not. We are too easily satisfied with a plausible rendering of a foreign text; we are prone to measure proficiency by the amount of work done or the time spent in doing it, rather than by excellence of accomplishment or accuracy of method. We encourage guessing, and the prize too often goes to him who shows greatest skill in concealing his ignorance. In a word, we are too easily satisfied with appearances and attach too little weight to the moral effects of doing honest work.

There is another reason, as I have said, why we do not choose to follow European methods of education: We don't want to. We don't want to because we are not bound by social

traditions. Our society is a social democracy. Our schools are designed to grant equal opportunity to all. In most other countries, England included, the school system is deliberately intended to keep some down while helping others up. So long as our mode of government endures we cannot shut the door of opportunity in the face of any citizen. It is the greatest experiment the world has ever seen, and while there are many who would gladly see it fail, it is our bounden duty to make it succeed. It would be presumptuous to say, after only one century of trial, that success is already assured. This is only the beginning. We are just coming to realize some of our blessings, as we see more clearly for the first time some of our dangers.

How can a nation endure that deliberately seeks to rouse ambitions and aspirations in the oncoming generations which in the nature of events cannot possibly be fulfilled? If the chief object of government be to promote civil order and social stability, how can we justify our practice in schooling the masses in precisely the same manner as we do those who are to be our leaders? Is human nature so constituted that those who fail will readily acquiesce in the success of their rivals, especially if that success be the result of "cuteness," rather than honest effort? Is it any wonder that we are beset with labor troubles? We are, indeed, optimists if we see no cause for alarm in our present social conditions; and we are worse than fools if we content ourselves with a superficial treatment of the ills that afflict us. Legislation may do much to help us out of trouble, but it is only education of the right sort that can permanently keep us from ruin. There never has been a time when we were more in need of sound education, and in the struggle for existence that is yet to come we shall need a better education than we conceive of today.

There is one educational principle that is peculiarly American. It is that every man, because he is a man and an American citizen, should be liberally educated so far as circumstances will permit. A man, according to our Magna Charta, is entitled to life, liberty, and the pursuit of happiness. The first business of the schools is to make life worth living, liberty worth striving

for, and the pursuit of happiness something for which no man need be ashamed. We need, in my opinion, one more article in our educational creed. It is this. In making a man, make him good for something. It is a practice easily recognizable in the history of our universities and professional schools.

The next step is to see that the common man is equally well provided for. A beginning has been made in the enrichment of the course of study in our elementary and high schools, thus giving a choice of studies and better preparation for life if the pupil knows how to choose wisely; in the introduction of the natural sciences, manual training, and the domestic arts, thus giving some acquaintance with the industrial processes underlying our civilization if the subjects be well taught; and finally, in the differentiation of the school courses and school work whenever the future vocations of the pupils are definitely known, as in the negro schools of the South, the county agricultural schools of Wisconsin, and the trade schools of some of our eastern cities.

But all this is only a beginning. At best but little can be done before the age of fourteen, but that little can be of the right kind. In teaching arithmetic we can as well present problems of every-day significance as those which are never met with out of school; in reading we can read that which is worth remembering; in history we can dwell upon some events which are not political; in science we can prepare for farming as well as for college; in manual training and the domestic arts we can do in the small what the race has done in the large in its efforts to provide food, clothing, and shelter, and to perfect means of communication and transportation. If nothing else is gained from the elementary school than a wholesome respect for man's industry, a good basis is afforded for participation in man's occupations.

The serious preparation for practical life begins for the great majority of us at the age of thirteen or fourteen, on leaving the elementary school. The most dangerous period in the life of a boy or girl lies just ahead—say up to the age of nineteen or twenty. This is the time when the average boy must learn to be self-supporting, and when the girl must fit herself for

domestic duties. It is the time, too, when technical training counts for most. I contend that every American boy and girl is entitled to practical help in this time of greatest need—and at public expense, too, if the state maintains high schools, universities, and professional schools for those who aspire to leadership in professional life. My reasons for this contention are these:

1. Anything that will contribute to the greater efficiency of the workman is a contribution not only to his own well-being but to the wealth of the nation.

2. Anything that will lead the workman to take more pride in his work tends to make him a better citizen and a more conservative member of society.

If it be possible to make each man, no matter what his social standing may be, an honest leader in his own field, a workman who is not ashamed of his handiwork, then we need fear no criticism of our colleagues across the sea, nor need we as an industrial people fear the competition in the world's markets. More than that, we need never lose faith in the righteousness of American ideals or dread the consequences of our social democracy. If there be those who say the task is impossible, I answer in the words of General Armstrong, when some one doubted the possibility of negro education, "What are Christians for but to do the impossible?"

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V

PHYSICAL TRAINING IN HIGH SCHOOLS

A noteworthy feature in the educational life of today is the growing importance of the public high school. Not so many years ago much sentiment and some candid opinion was expressed against any charges on the public treasury beyond the demands of the elementary grades. Now the secondary school is accepted as an essential part of the system of state education and is winning in a remarkable degree public confidence and support. On this point statistics of attendance and school buildings are conclusive. In 1890-91 there were 2771 public high schools in the country; ten years later the number had grown to 6318, an increase of over 120 per cent. In 1887 there were in attendance on secondary schools, 35,599 pupils, or .071 per cent. of the population; in 1890-91, 211,596, or .331 per cent., and in 1900-01, 541,730, or .701 per cent. Of the total, 224,584 were boys and 317,147 girls. Thus in ten years there was an increase of 150 per cent. Along with this growth there has been a decrease of the private secondary schools as compared with the increase in population.

Within the last decade the spirit and methods of the high school have undergone radical changes. Emphasis was formerly laid on the preparation for college, and the standing of a school was largely determined by the success of its graduates in meeting the formal tests set by the higher institutions. A large proportion of the teaching force was occupied in giving instruction to the pupils preparing for college. The prescribed requirements were artificial and technical, and designed to aid the college professor rather than to provide adequate and fitting means whereby boys and girls in their teens might best realize themselves and find expression for self-activity.

The high school is now being placed on a broader basis and

is being transformed to serve the pupil and not the college. A spirit of independence is growing among secondary school teachers. In the near future the college may be only too willing to yield to the high school and accept gladly such candidates as are recommended by principals and teachers.

That the high school is finding and filling its own place in the educational scheme is shown by the changes in curriculum, methods of instruction, and general attitude toward the young people who come under its influence. The old-line studies of Latin, Greek, and mathematics no longer maintain their absolute supremacy. There has been a broadening of opportunity. The fitting of boys and girls for the practical duties of life and the training for economic efficiency are recognized functions of the school; attitude of teacher toward pupil is more intelligent and sympathetic, and the criterion of success is no longer that of the drill master. In this tendency toward differentiation and preparation for definite callings there is danger that the school may neglect its real and high mission to train boys and girls into true men and women, and be swayed by the ambition to send out stenographers, bookkeepers, and carpenters. Against such extremes school men must ever be on their guard. A broad, generous, intelligent appreciation of the nature of the pupil and his possibilities is the only adequate basis for the secondary school curriculum and the determining influence on the teacher's attitude and spirit.

As was the case in college, so in the high school, those in authority have been slow, not to say reluctant, to seize the opportunity for shaping the ideals of youth thru the medium of physical exercise and athletic sports. This phase of education applies to girls as well as boys, but the method of approach differs so much in the case of the two sexes that the important and difficult problem of directing the boy's energies along right lines may well be considered by itself.

So manifest are the difficulties and so great are the evils resulting from undirected athletics, so prone is youth to extravagance in exercise that, in many schools and communities and on the part of many headmasters, the attitude is one of hostility. All forms of sport are looked upon as rivals, a

menace to the intellectual life of the school. Many ingenious rules and regulations are framed to restrain, if not to prevent altogether, the expression of youth's natural desire for sports and games.

That grave and serious abuses, injurious to school and individual, are connected with athletic contests, cannot be denied. These evils range from bodily injuries to players, thru indiscretion and over-exertion, to financial looseness and dishonesty on the part of managers and the violation of every principle in a gentleman's code of honor in the overweening desire to win some match game. Public attention is largely focused on the colleges and their abuses, but the same evils obtain in secondary schools, with the danger of more serious results on the character of the pupil and the morals of the school.

The youth in his teens is singularly impressionable. He is prone to hero worship, and his ideal is often embodied in the athlete, the champion in football or baseball, and he lacks the ability to discriminate between the clay and brass and the gold and iron of his idol.

Then there is the constant temptation to excess. This natural weakness of youth is accentuated by the prevalent American tendency to overdo. The spirit of competition is strong. "Anything to win," is the motto. Unless wisely directed, the athletic side of the school claims many victims and takes a place of undue prominence in the thoughts of the pupils.

It must be considered in this connection that the boy carries with him to college the standards of moderation in play and of due proportion in allotment of time between study and recreation that he formed in the high school, so that proper regulation of the athletic interests of the lower school cannot but have a wholesome effect on the spirit and temper of the higher.

Another unfortunate condition is when sports and games fall into the hands of a few students, who arrogate to themselves undue prominence and practically debar the great mass of students from participation. No such general contests are known as the football match wherein Tom Brown was introduced to Rugby life.

With a frank admission of all these possible or actual evils connected with the various forms of athletic sports, and with full recognition of the need of control and restraint, still the attitude and policy of the average high school is hardly commendable.

For, as has been said above, the desire, the instinct to use his physical powers in plays, games, and all forms of competitive sport is inherent in every true boy, and its expression is essential to his fullest development, not only in bodily power, but in keenness of mind and strength of character.

Such a means of education should be utilized, and the wise schoolmaster is he who enters sympathetically and intelligently into the domain of the boy's interests and secures by and from them the largest educational values and results. It is a hopeful sign of the times that the conservatism of school men is giving way before the flood tide of new conceptions and knowledge concerning the child and youth. The routine of the school and traditions of culture from the printed page are no longer given an unreal and exaggerated importance. Teachers are learning to use the innate powers of the young and to work in many ways along the line of least resistance. The old figure of the marble under the chisel no longer stands as the typical illustration of the educational process. Even the parallel of the bending of the twig has been overworked.

Any consideration of the place of physical training in education naturally divides into two parts: the formal gymnastics and the wider field of sports and games. In the gymnasium the object of the exercises is the formation of correct habits of posture, breathing, walking, and the proper control of the great fundamental muscles of the trunk and limbs, with a view to securing a vigorous tone in the vital organs and in the centers of nervous energy. Weakness or defects revealed by physical examination may in many instances be remedied by carefully prescribed corrective exercises. Experience shows that oftentimes such ailments are unknown to the boy himself.

The drill on the floor gives the instructor an opportunity to meet every member of the school and to impress on him the importance of regular habits and system in the care of the body.

With the gymnasium work may be combined short talks at stated intervals on personal hygiene. The interest of the pupil may be secured and active attention to his proper physical development obtained by furnishing him with a tabulated statement of the more important measurements as taken each year. A normal boy is alert to his growth in weight, height, chest capacity, and strength, and the ambition to excel in these measurements acts as a powerful motive in leading him to correct habits of living.

Gymnasium work should not be made too formal or complex. Drill with dumb-bells, wands, or Indian clubs, and simple arm, trunk, and leg movements, with some marching, are sufficient. Insistence on the niceties of exercise detracts from the value of the gymnasium. The aim is to secure vigor rather than to impart finished grace of action. After the drill it is well to let the entire class take part in free play, such as basket-ball, battle-ball, or others of the numerous floor games now at the command of the physical instructor. Much freedom and only a moderate adherence to the rules of the game are to be required. Nor should too keen a rivalry be encouraged, and, with this end in view, frequent changes should be made in the personnel of the opposing groups, or rather the two parties should be made up at each session, so that no settled antagonism may develop.

But with all the freedom, the instructor must insist on a certain amount of formal obedience. Each member of the class must report promptly and follow directions without hesitation. A simple uniform helps to give distinction and character to the gymnasium drill. The time devoted to the exercise must be left to the judgment of each headmaster. Two periods a week of from forty-five to fifty minutes each may be regarded as desirable for the members of the lower classes. The gymnasium may be regarded as an elective for seniors. It is well to consider physical exercise as a fixed requirement of the school for promotion and graduation.

With a carefully regulated course of gymnasium instruction, the school possesses a mainstay and central core, about which the athletic interests will gather, and for this reason the greatest

attention and care should be spent in keeping it strong and sound and of such a nature as to gain the support and hold the interest of pupils. They should be led to see that attention to this phase of school work is the best means of keeping the general athletic life healthy and vigorous. Few boys can resist such an appeal, for their loyalty to games is instinctive and strong.

Such an interest in athletic contests shows by its very intensity that it is deeply rooted in the soul of youth. Scientific research has in recent years worked out many important generalizations regarding the play spirit.

Competitive games, such as are the especial delight of the adolescent, and particularly team contests, have a certain connection with tribal warfare, and in them the boy rehearses the experience of remote ancestors in actual battle and finds expression therein for the virtues, or splendid vices, as St. Augustine calls them, inwrought by generations of these struggles. It is certain that in this tutelage of warfare there were developed traits of character most vital to the success of the individual and to the promotion of community spirit and effective united action for the common weal. The good results of games and sports are by no means limited to the betterment of physique. They do constitute an important means for bringing to highest efficiency the great fundamental muscles of the body and giving high quality to the vital organs and soundness to the vital processes. But, more than this, well-regulated athletic contests promote mental qualities of no mean value, quickness of perception, keen discrimination, and the power to reach conclusions from facts observed. Moral traits, such as self-restraint, endurance, courage, decision, and the ability to rise superior to defeat find abundant room for exercise and development. The saying of the Duke of Wellington that the Battle of Waterloo was won on the playing fields of Eton has a deeper meaning than appears at first thought.

Then, too, it must be acknowledged that the training and discipline of the classroom are, in large measure, aloof from the actual, every-day life of the world. A too scholastic type of mind may indeed unfit its possessor for the conditions he must

face in business or professional life. The proverb, "Knowledge is power," has been a pitfall for the youth who hopes by encyclopedic attainments to win success. With the possession of the treasures of literature, art, and science there must be joined ability to act with decision, courage, and vigor, and with definite end in view. Not only may the scholastic habit be a disadvantage in the struggle for a living, but the conditions for book study and the requirements of the average school are not such as appeal to the nature of many boys.

To this reason may be due the fact that so large a percentage of boys fail to graduate from the high school. The tendency to leave begins before the secondary school age. In 1900-01 41.46 per cent. of the membership was composed of boys and 58.54 per cent. of girls. Stratton D. Brooks of Boston, in a recent study of causes of withdrawal, shows that 48 per cent. of the cases of boys leaving school is due to the desire to go to work or for activity, or to indifference. These influences begin to show great strength at the age of fourteen and continue thru the high school period. Mr. Brooks concludes:

"Desire for activity is perhaps not the best term to use here, for from his babyhood the boy has been at all times as active as possible. There is no sudden awakening from a state of lethargy to one of vigorous action. It is rather a change of ideals on the part of the boy, rising, no doubt, as part of the adolescent readjustment. His activity now tends to pass over from the play to work attitude. He wants to do things of real worth, to have a real motive, and to see a real result. His head is full of ideas, not book ideas, but world ideas, life ideas. His body is full of energy—not well directed, it is true—but yet energy and latent possibilities for productive work, and the boy unconsciously, perhaps, but none the less powerfully, is driven to express his ideas in action. The school, to be sure, offers him the chance to express ideas in language, but it thrusts on him the particular ideas it wants expressed and then stops him at every turn to mark the vowels, or give the syllables, or correct the grammar, until the idea and all pleasure in it are forever lost."

Such conditions indicate not only the need of a readjustment

of the curriculum to meet the needs of youth, but also that every advantage should be taken of such phases of school life as afford opportunity for expression of the boy's normal activity. One of the best of such agencies is well-directed athletic sport.

The foundation for a vigorous, effective, well-balanced manhood is a body whose parts and functions are so organized and developed as to do most perfectly the will of its owner when directed to worthy ends. In outdoor contests, with the zest of friendly rivalry, such physical qualities are best acquired. Scientific formal gymnastics do not possess like interest. The very absence of self-consciousness, the abandon of the player, is a valuable hygienic quality. Not only are the vital organs acting under most favorable conditions, but they are properly coördinated. There is a free play of the nervous system and an accumulation of energy and resources in the great ganglia, the storage batteries of the system, that give the power to work and accomplish results with least friction and waste.

Especial benefit is gained from such exercises by the sympathetic nerve centers, on whose soundness depend poise, sanity, and well-balanced views of life and its experiences, that common sense to which the maker of proverbs doubtless refers when he speaks of "Wisdom as more precious than rubies."

In considering the discipline given on the playing field, it must be noted that these experiences are intensely real to the boy. Because of this reality the impressions made on mind and character are deep and abiding. Moreover, impression and expression, instruction and self-activity are organically united in play, and such a twofold process is the highest aim of educational method and philosophy. In the field of manly sports there is found the training that makes for quick and accurate observation, alert attention, application, and the executive power to make the most of opportunities. Is there any teacher who would not rejoice if the same alert, intense mentality were applied to algebra or Latin as the batter bestows on the ball as it comes toward the home-plate, or the full-back exercises on the opposing players as he plunges toward the enemy's goal?

And the training in moral qualities is no less valuable. Many a youth learns in most practical fashion that self-control, temperance in food, drink, and bodily exertion, courage, and obedience are indeed cardinal virtues. A member of a team must be ready to sacrifice himself without question when occasion arises. More than that, he must be self-forgetful. The schoolboy who, in act, word, or thought, is disloyal to the nine or eleven soon feels, and in no uncertain fashion, the condemnation of his fellows. Loyalty to the school easily becomes the first rule in the youth's code of honor. Here is the germ of the splendid devotion to country, truth, and freedom that has given the world its witnesses and martyrs for the cause of mankind in all ages and on countless fields of strife. Under the stimulus and inspiration of this loyalty many a lad conquers the habit that makes him unfit for diamond, gridiron, or rowing course. There are schools where the physical instructor has been able to raise the moral tone of the entire student body by means of the ideals and standards developed on the playground. Grosser vices have been checked and driven out. When a boy once realizes that a certain habit weakens him physically and keeps him from competing with his mates on equal terms, he is given a powerful incentive to mend his ways.

But possibilities for good are counterbalanced, as always, by the danger of abuse. The proper conduct of athletics is one of the most difficult and urgent problems that confront the school man of today. Many of the evils attendant on interscholastic contests are notorious, but some of the gravest abuses are not of such a nature as to engage public attention. The doings of the schoolboy do not occupy so large a place in the columns of the press as those of the college or professional athlete. Yet influences for good or evil in the secondary school age are most potent in their effect on the physical, mental, and moral being of the youth.

In dealing rightly with this problem, the attitude and personality of the principal in the smaller schools, and of the physical director in the larger institutions are elements of the highest importance. Here is service that calls for a genuine, sincere, whole-souled man, one who understands and sympa-

thizes with boys, who knows their needs and their besetting sins, their worthy ambitions and aspirations. With such qualities of mind and heart he is sure to win the esteem, respect, and loyalty of his charges; he will have their confidence, and to him they will go in perplexity and trouble. Graduates of Amherst College can testify to the place filled in that institution by Dr. Edward Hitchcock and to his power and influence in shaping lives for good. Such an opportunity is open in full measure to the secondary school instructor. He approaches the youth on his plane of greatest interest and may work along the line of least resistance.

In technical qualifications the physical director should be a good gymnast, an athlete of sufficient ability to hold his own in ordinary contests; with these should be joined a thorough knowledge of physiology, anatomy, and hygiene, and of the elements of medicine. He must be posted on the rules and regulations governing school games. Ability to coach, while not essential, is desirable. A competent physical director may well be intrusted with the general conduct of school athletics and given the responsibility for enforcing such standards as the authorities see fit to impose. Drastic discipline should be left to the principal. Restraint and control are called for in many ways. The impetuous youth, with the lack of caution so characteristic of the adolescent period, runs great danger of injuring himself by excessive sport or by participation in games of too severe a nature. In such cases the duty of the instructor is clear. Such pupils must be debarred from all games involving over-exertion. To enter a contest for which one has not adequately prepared by training, and for which one is not physically fit, is to defeat the very end and purpose of athletics. When the desire to excel in some sport becomes a distracting influence and leads to neglect of studies, there should be sharp restriction and even suspension from the team until the standing in the classroom improves. As physical well-being and intellectual growth are more important than any game, so the player who uses dishonest methods, who evades regulations, who sacrifices the best interests of the team to his desire to "star" is a fit subject for the severest discipline. No confusion of

moral standards should be permitted in the mind of plastic boyhood.

A strong and vigorous sentiment in the school is the best guarantee of right motives and methods in the different teams, for organized school spirit is a power against which no pupil can well stand. In American high schools and academies the building up of traditions, usage, and precedent has not yet been undertaken in any serious way. In this respect the great English public schools, Eton, Harrow, Winchester, Rugby, may teach valuable lessons. One finds there a more general participation in sports and an absence of the feverish, inordinate eagerness to win that is itself the source of so many evils in American school contests. To build up a body of customs adapted to our peculiar needs is one great opportunity that the present situation offers to the instructor of youth.

Certain general principles may be posited as guides in such an undertaking. School sports should be so organized that every pupil may be required to take up some form of exercise and to do his share in some competitive game. Many forms of such contests should be offered. The boy who does not like football, who, perhaps, should not play it, may find his opportunity in baseball, cricket, tennis, rowing, or fencing. Large squads for practice should be brought out and given careful training before the team is chosen. Games between classes and divisions of the school make for this general interest and participation. So strong is sentiment and so well established is this principle at Eton that the boy who does not enter either cricket or rowing is looked on with disfavor and suspicion. In this connection it should be noted that the condition most likely to breed abuses is one where a small group of boys control the athletics of a school. Such a coterie, when they see that the success, or even continuance, of a team depends on them alone and that there are no competitors for their places, often become overbearing, insubordinate, and disposed to conduct athletics in a semi-professional spirit. But when there are many candidates for each position and the members of the team and the pupils know that places are held only on good

behavior, the tone of athletics is easily kept pure and its standards high.

With such large squads of players it is comparatively easy for teachers to insist on good scholarship and gentlemanly conduct from all who represent the school on its team. The technical rules may well be left to the judgment of the principal and his associates, but they should be severe enough to debar from interscholastic contests any one who is not giving evidence of faithful and earnest work in the recitation room. Conversely, the desire to win a place on the school team often acts as a spur on the laggard in his studies and holds him to his work. Any one guilty of misconduct that reflects discredit on the institution to which he belongs should be considered as thereby forfeiting his right to represent it. By wise and judicious enforcement of such rules for the individual players, principal and physical instructor may coöperate so as to make athletics respectable and a power for good. In the various class contests and affairs within the school no barriers should be raised against participation, but a general interest promoted.

Definite regulations and control may well be exercised in limiting the number of interscholastic contests. The American tendency to overdo is shown in the schedule of games. Far too many events are held. Such contests, especially when there is sharp rivalry, give rise to excitement that has an unsettling effect on the school at large. The players are subjected to an undesirable strain from too many games and the training required. In English schools attention is centered on a few matches of importance, as those between Eton, Harrow, and Winchester cricket. In thickly settled parts of the country, as Boston and vicinity, New York and Chicago, and other great city centers where there are many high schools in close proximity, the use of sharp restraint is especially marked. Concerted action on the part of headmasters and the formation of leagues, each of a few schools and with schedules of moderate length, will easily bring to pass this needed reform. It is extremely doubtful if any one school or master can make headway against the tendency to excess. Combined action,

besides being more effective, has a much wider influence than any isolated example of virtue, no matter how shining.

It should be a settled policy of those in control to abate the severity and intensity of the contests. Training should be a recreation and not a burden. Secondary schools are in danger of aping the colleges in their athletics, with the result that, in the desire to win, the element of pleasurable sport is lost. It should be constantly impressed on the young athlete that gentlemanly conduct, fair play, and a genuine enjoyment of the game are of more importance than carrying the ball across the goal line. Above all else, let the school beware of the leaven of professionalism.

Success may best be secured when the members of the school are recognized as partners in the conduct of affairs. It is the part of tact and wisdom to leave as much as possible to the boys' own initiative and discretion. They should understand that the authorities are ready to keep company with them in all ways that promote the best interests of the school, but that if they turn aside to dangerous paths they will not be followed. With privilege goes responsibility, and boys as a rule appreciate such appeals and confidences. Sometimes it is well to let trial be made of some doubtful project. The resulting failure or embarrassment teaches a lesson more emphatic than any precept.

In all management, whether of schedule, finances, or conduct of games for the convenience and comfort of players and spectators the school should realize that its credit, standing, and best success depend on a strict adherence to business methods. Especially in the handling of funds and the arrangements for the field at important matches is there need of firm control and watchful supervision.

But, details aside, it would appear that this subject possesses great possibilities and that a serious duty rests on those charged with the education of American youth, to rightly use the athletic instinct, the healthy desire of the boy to excel in many sports, so as to train up in the public schools a strong, fine type of manhood blessed with a vigorous physique, an alert mind, and a sturdy character to do and endure.

The demand for proper playgrounds in our great cities, for athletic fields and gymnasiums, should be constantly urged on the people. Adequate supervision by competent instructors should be provided in each school, and field sports and contests so directed and organized as to bring out the best results in character. Eminent social qualities, readiness for service, united action for the common good, self-sacrifice in the cause of school, city, country, humanity, all these virtues may find expression and room for growth on the playground.

If such ideals can be set before the boys of the country thru the example and precept of teachers and thru the lessons of the classroom; if the youth practice these virtues, test them, and make them their own in their mimic, but real, struggles, then it may be said, after the nation has passed thru some fiery trial, that the playing fields of the public schools have done their share in winning the decisive battle of the republic.

WILLIAM ORR

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VI

THE SEVEN FACTORS OF EDUCATION

"Produce! Produce!" exclaims Teufelsdröch in *Sartor resartus*, "Were it but the pitifullest infinitesimal fraction of a product, produce it, in God's name! 'Tis the utmost thou hast in thee: out with it, then."

I

THE CONDITIONS

Many years ago I was profoundly impressed in reading for the first time Ruskin's *Seven lamps of architecture*, as setting forth the universal illuminants of architecture, the architecture of all time and of every people.

Am I too venturesome to enter an arena so warmly contested as that of modern teaching and endeavor to determine whether there are also universal illuminants which lighten the way to the perfect training of the mind? Is there in education, as in architecture, an absolute code derived from the intellectual experience of generations of thinkers, a code for every subject, for all time, and for every people? Or is the general revolt from authority, which is the most conspicuous tendency of our times, to leave education also without the sanction of experience?

I was drawn to these questions: first, by consciousness of somewhat cloudy thought in the matter, consoled only by signs of similar cloudiness in others; second, by rising indignation against the apparent infection of education in this country with certain material and experimental tendencies, as if from the contamination of a triumphantly successful commercial age.

My inquiry has not resulted in the discovery of new laws. Separately, the illuminants of education are as near and familiar parts of our intellectual inheritance as collectively they

are far from lighting the long and often obscure paths of the average teacher. Few perceive with the clear vision of post-humous critics and biographers that the over-cultivation of one or more of the factors distinguishes the well-balanced from the ill-balanced mind, the efficient from the inefficient student. From the broad standpoint of symmetry, many very learned men, as well as many great observers, are alike imperfectly educated, and for this their guides and masters, in part at least, may be held responsible. One work I have studied, by a man of high authority, omits all reference to what I regard as the supreme factor of education.

My inquisitive route is one of observation, rather than of theory; it follows the lives of men, rather than the ways of the books. Consider Huxley, altho not the most creative thinker, as the best pattern of the educated Englishman of the last century, and, carefully observing the gradual attainment of his perfect discipline, we find it arose less thru his teachers than thru his own discernment of the collective and cumulative value of several educational factors and his deliberate purpose to experience them all, so far as lay in his power. Pasteur, guided by a similar instinct, actually resisted the advice of some of his professors. Similarly, we observe the superb education of Darwin and of Spencer as chiefly a self-schooling growing out of the consciousness of certain intellectual wants, such mental appetite, and the determination to satisfy it, being one of the symptoms of greatness.

From such biographies, from the actual methods of the great teachers, it appears that there are universal illuminants, that there is an absolute code by which to develop the infinitesimal, as well as the almost infinite, powers of the human mind.

The material and experimental spirit in America

In contemporary American life there are two currents which are setting away from, rather than toward a clearer perception of the "universal" in education—these are our materialism and our experimentalism. Much of the material spirit undeniably pervades our college halls and mars the otherwise splendid

progress of educational idealism in this country; computers are heralding great gifts and statistical increases in which numbers are swelled by summer schools, by dental, veterinary, and miscellaneous departments, as if to maintain prestige on a distinctively quantitative, rather than on a qualitative, basis.

Experimentalism is partly an intruder from our material atmosphere, partly an offspring of the general revolt from authority.

It is a truism of trade that our manufacturers owe a large measure of their supremacy to their readiness to abandon old machinery and substitute new. It is as much an American instinct to welcome change as it is an English instinct to shrink from it. Was not the manufacturers' spirit more or less pervasive in the Boston meeting of the National Educational Association of 1903,¹ when the prolonged debate was summarized, with some irony and much truth, in the statement that from electives and courses we are to pass to experiments with curriculums as a whole, and with the period of studies on a grand scale; in other words, that the colleges shall compete in the cultivation of brains after different fashions, just as rival furnaces are competing and experimenting in the production of steel; that we are to witness the survival of the fittest institution, which shall turn out the largest quantity of the best product in the shortest possible time, and thus most thoroly exemplify the spirit of American trade.

Confused by the tremendous inrush of new knowledge, we have already been experimenting for some years past. Perhaps our impulse for facile modification and adaptation is nowhere more conspicuous than in the rapid movements of these decades, prompted by the fallacy of regarding change as identical with progress, and ignoring the fundamental evolutionary law that change is as often retrogressive as progressive. It is quite possible, not to say probable, that many of the sweeping alterations which have taken place, and are now contem-

¹ "The length of the college course and its relation to the professional schools." Papers read before the Department of Higher Education of the National Educational Association at Boston, Mass., July 7, 1903, *EDUCATIONAL REVIEW*, New York, September, 1903

plated, are distinct retrogressions, and will remove us farther and farther from solid intellectual advance; that they conform to the commercial spirit, rather than transform it; that some of our ablest educators have been unwittingly contributing to a backward movement by failing to grasp clearly in their own minds, or to set clearly before the nation, the slow and difficult steps which are necessary to teach men how to think and how to produce.

Consider the case of the college. It is generally, but not altogether, fairly alleged that it is a patient, that it is a sick organism, even that it has reached a condition which may be regarded as useless. Remedies are being administered, not from any very clear system of educational therapeutics, but on the rule that when one tonic fails another shall be given trial. A cupping process or drawing blood is suggested; one presidential doctor prescribes four years of life, another allows three years, another two; another proposes to cut short life altogether, predicting the extinction of the college and the direct passage from the high school to the university.

Extinction is the *reductio ad absurdum*. Such an end to experimentalism would be a national calamity, because schools can never equal colleges, either in resources or in fitting for citizenship; because the longer period of the education of the larger number would fall into the hands of women teachers, who are constantly multiplying in the public schools; because the democratic social spirit, so vital to the college, is fatal to the university, the future triumph of which depends chiefly upon the enforcement of the idea that here belong exclusively the young intellectual aristocracy of the country.

Even abbreviation may be another instance of failure to distinguish between progressive and retrogressive evolution. If a year be cut from the college to adjust the year which has been added to the school by belated entrance or advancing standards of admission, the net result is to substitute a year or two of school life for a year of college life. Is this a progressive change? Is not a college year rich in historical associations, teaching capacity, libraries, laboratories, museums, and all the other products of generous endowment of more value than a

school year? Similarly, if learning or the acquisition of general knowledge remains in fashion even by apology as a specific function of the college, does not the prodigious intellectual advance of the nineteenth century tend to lengthen, rather than shorten, the college course of the twentieth century? If the college period is to be changed, would not a consistent movement be the opposite of an abbreviation? Would it not be for the more effective school, the earlier admission to college? I do not pretend to settle ² this very difficult question, but only to put it in the light of an evolution problem.

The friends of the patient advance the traditional plea that the college is to be preserved as the home of "liberal culture"—a laudable reason for prolonged life, which, however, contains an element of indefiniteness. Here we approach a more rational diagnosis of the disorder, which, in itself, suggests a remedy. Liberal culture, for what end or purpose, one may ask? Is not this lack of purpose, this dysteleology, to borrow an Haeckelism, the internal disorder which has bred the pathological condition of the college during the very years when the university and the technical school have flourished like green bay trees?

Refreshing definiteness of purpose in training for material production is the invigorating principle of the technical schools which show no signs of internal disorder or degeneration, and as to the utility of which there is no question. No one proposes to cut their periods from four years to three, or to two, or to

² My personal opinion may, however, be stated that economy and careful adjustment of time should begin in the school years where the vista of life seems so long that the value of time is not appreciated; that early waste of time should not be compensated for by the abbreviation of the real preliminary culture period of college life. If we are to experiment, therefore, *let us try the experiment of thoroughness of education*. If one student is so clever as to acquire in two or three years what another does in four, let him profit by making his work broader and more intense. We shall at least be on the side of the method which has led to the best creative work in all time. If the American college disappears in the struggle for existence between the high school, the technical scientific school, and the university, it will not be because it deserves to disappear, but because the men at the helm of college education have no clear conception of what they are aiming to accomplish and are trying fortuitous experiments in quantitative matters of subjects, hours, days, and months, instead of reforming the quality and standard of the work accomplished.

eliminate these schools altogether; they have their weaknesses, but no one charges them with dysteleology. Similarly, production in the form of original research is the definite ideal of the American universities. This ideal was first embodied among us in the early years of the Johns Hopkins University, when, with an assemblage of gifted teachers, and with the flower of American students, the average results thruout all the departments were commensurate with the best attained anywhere, and at once spread thruout the world the new and momentous fact that America could establish and maintain a university. Such an ideal is, however, not maintained, chiefly because the American university at present rests upon the insecure foundation sands of superficial college work.

It was my privilege recently, in one of the most imposing of academic processions, to walk beside a profound student of international law. I could not help feeling the lack of proportion between the form and the substance, the flowery display of hoods and gowns, and the productive scholarship actually represented. "How can we live up to these brilliant colors?" I observed to my companion. "How can we be as learned as we appear?" Raising his hand above his head, he jokingly replied, "By putting the dollars up there, by making the teaching profession more of an object." This partly jesting and partly truthful answer did not include all the reasons why American intellectual production has not reached the general grade of that of the old world, and if I have spoken of the college, of the school, of the university as separate, I have misled—there can be no discontinuity.

A serious answer to this jesting question would be that we shall be as learned as we appear in America when, not only in university, but in school and college, we reach a perfectly clear understanding of and unite our energies in the chief object of education, namely: the *inculcation of those factors which, according to the several abilities and predispositions of men, culminate in the several forms of productive activity.*

Production is conceived, with Carlyle, as a man's output, as the utmost he has in him, his resourcefulness, his centrifugal, rather than centripetal life; in its highest form his creative

power. If training for production vitalizes the technical schools, if it is the ideal of our universities, is it not evident that such training, in the broader sense, is the restorative principle of the American college; that the collegiate antidote is not to be found in further experimentation, in lengthening or shortening periods, in eliminating Greek or mathematics, or any other difficult subjects, in a rigid required system, or in a universal elective system, nor even in inducing men to think and study by means of a preceptorial system, admirable as it may prove to be; but that the elusive remedy is rather to be sought in the application of a basal or universal working theory of education?

In such a theory, we are first to substitute the newer centrifugal ideal of production for the older centripetal ideal of liberal culture. Liberal culture, that indefinable quality imparted by learning multiplied by the sense of beauty, is to be the stepping stone; it is to be the obligato or running accompaniment, rather than the solo; it is to be the stage, rather than the summation. Second, we are to ascertain in what sense, in what measure, and by what means the college may range itself with the polytechnicum and the university as a school for training producers. Such training is a very serious undertaking; if there is any field of human activity in which it is light or easy, I do not know of it, but rather contend from the precept and example of my chief masters, McCosh, Huxley, and Balfour, and from the much more exacting master, experience, that the road from nothing to culture, and from culture to the point where man produces anything of the least value, is an extremely long and hard one.

I contend that some of our leading educators in the Boston convention of 1903 were hastening the tide of American haste and superficiality, instead of sternly telling that great assemblage of teachers of the nation some unpalatable truths as to our still subordinate position among the thinking producers of the world.

If we are to direct education thruout into the original, the creative, rather than into the receptive, the absorbent, the critical temper of mediævalism, I do not know how we can more clearly introduce its relation to our school and college life

and to the further elevation of our university life than by a series of contrasts, which will lead the way back to the main question: as to *what are the factors of education, which culminate in production?*

*Modern mediævalism and true modernism*³

"The mediæval university," observed one of the greatest teachers of the last century, "looked backwards; it professed to be a storehouse of old knowledge, and except in the way of dialectic cobweb-spinning, its professors had nothing to do with novelties. Of the historical and physical (natural) sciences, of criticism and laboratory practice it knew nothing. Oral teaching was of supreme importance on account of the cost and rarity of manuscripts. The modern university looks forward, and is a factory of new knowledge; its professors have to be at the top of the wave of progress. Research and criticism must be in the breath of their nostrils; laboratory work the main business of the scientific student; books his main helpers. . . . The cardinal fact in the university question appears to me to be this: That the student to whose wants the mediæval university was adjusted looked to the past and sought book learning, while the modern looks to the future and seeks the knowledge of things."—HUXLEY.

What is mediævalism? Is it not surviving in the methods proposed and continued in some of the most modern professional systems? I am inclined to answer the second question in the affirmative.

We should not, for a moment, fall into the almost universal error of confusing mediævalism in education with classicism, an error which has been widely disseminated by such brilliant and effective essays as Adams's *A college fetish*.

Greece and Rome illustrate the distinction. The relatively non-productive Romans were partially mediæval. Rome, economically, and, in a large measure, intellectually and artistically a parasitic or centripetal state, was supported by phenomenal military genius and genuine centrifugal or constructive powers in law and government. Not so with highly centrifugal Greece. Greek supremacy was no accident: it was due to great educational conceptions applied to a people purified by race culture and selection.

³ The main ideas of the present article were worked out and privately printed in 1902 under the title "The mediæval and the true modern spirit of education."

In education, Socrates, Plato, Aristotle were eminently men of their period, or moderns, as we learn from their frequently reiterated views. It will be recalled that the Socratic solution of the educational problem was that the new state of society was to be based on knowledge, that the germs of knowledge were inherent in every human being, by virtue of his own experience, and that these germs could be developed by the dialectic process. The whole bent of Socrates as a teacher was the cultivation of originality. His rule that, to educate a youth, the less we think for him and the more he thinks for himself, the better, is the root of the true modern spirit, because it is the first step toward production. Louis Agassiz professedly adopted the Socratic method in teaching zoölogy, and Huxley's method was largely Socratic. Plato observed: "We next come to arithmetic, geometry, and astronomy . . . all citizens shall learn the rudiments of these sciences, not because of the necessities of practical life [a word for our most practical schools], but because these are endowments belonging to the divine nature. *By a good method, the teaching of these sciences may be made attractive and interesting, so that no force may be required to compel youth to learn.*" Inspiration, sequence in the development of body, mind, and soul were Plato's modes of training the young citizen, while his curriculum was surprisingly similar to that of our older colleges.

Unfortunately, there is preserved only a fragment of Aristotle's writings on the art of teaching, our knowledge of his opinions on the development of the mind being largely inferential from his works and from his intellectual ideals. If these great Greeks had recommended the youth of their country to devote ten of the formative years of their lives, first, to the Mycenæan language and culture, and, second, to the Egyptian and Mesopotamian languages and cultures, then the few who still maintain that our modern youth should largely devote the formative period of their minds to ancient languages might rightfully claim to be classicists.

If there is such classical authority for the anticlassical movement, it does not follow that the elimination of the substance has eliminated the spirit of mediævalism from among the anti-

classicists. The true classicist may be one who follows most closely the highest classical models, and these were certainly the models of the Greeks, both in their methods and in their achievements. The Greeks will be modern for all time, and are still to be studied for the truest modern ideals, for ideals which resulted in the most remarkable achievements in the way of centrifugal life that the world has known, considering always the period and the infantile state of knowledge. While anticipating us in the sciences, in the extraordinary development of mathematics, in the discovery of the evolution theory, they gave ethics, philosophy, literature, and science their foundation stones. The destruction of the Greek intellectual movement by political, moral, and social decay, and by the loss of numerical and military supremacy, set the intellectual progress of the world back two thousand years.

With the centrifugal Greek spirit, contrast the centripetalism of the old educators in their renaissance of classical learning, impelled partly by the extraordinary intrinsic or inherent force in such fragments of this learning as remained; consider their sedentary life, absorbed in poring over and discussing what Aristotle and Pliny had to say about the world, rather than in travel and exploration of their own; contrast their scrutiny of the books of the ancients, rather than the book of Nature herself; their compilations in natural history with their dearth of observation of the objects about them, of the birds, the fishes, flowers, and even of human society.

This very over-valuation of classical literature and science inevitably brought the reaction of the great "observing century" which has just passed; a reaction partly ending in a false modernism, however, which may have exceeded the limits prescribed by the truest modern spirit. While we may abandon the claims for the classics of "superior mind-training value," or of "best conducing to a pure English style," we may adhere to them as our most highly perfected disciplinary studies, as developing systematic thinking, as familiarizing us with the marvelous classic spirit, as giving us a sense of perspective and proportion for our own lives and times, as fundamentally associated with the technical language of biology and other sciences,

with all discoveries or centrifugal work in classical history, art, archæology, and philosophy. The question is not as to the value of the classics, but as to the part they shall play in the educational period. Old Montaigne's epigram even to-day most truly expresses the real essence of the classical question: "No doubt both Greek and Latin are very great ornaments and of very great use, but we buy them too dear."

There is also the reaction to the "modern subject." In the artillery fire against Latin and Greek, in the smoke and confusion about elective and required courses, the impression is abroad that the modern subject constitutes the essence of modernism as opposed to mediævalism. This is a dangerous half-truth, for, considering the diversity of subjects upon which the minds of great men have been bred down the ages, is it not apparent that the essence of the matter must lie less in the subject than in the intellectual objective of the teacher and of the student? Do we not often observe the modern languages taught in a most intensely mediæval fashion, and the ancient languages under a different type of teacher as sources of a most modern spirit? May not the classics be taught in such a way as to rapidly develop all the forces of education, altho such forces may be still more rapidly and readily developed thru the sciences? It is not a matter of fancy, but of fact, that, despite clear perception of its special objective value, the very teaching of science itself is still largely after the mediæval, dogmatic fashion; and that even the "verification of anatomical fact" method of Huxley has its dangers.

Asymmetry and superficiality are the two words which sum up my criticism of our present American education from bottom to top. Swinging like a pendulum, it has lost some of the merits of mediævalism, without attaining the full advantages of modernism.

Accepting the general truth of Huxley's brilliant, if somewhat extreme, contrast between the mediæval and the modern spirit, as quoted above, we see that professed modernism in education still contains a large admixture of mediævalism in its failure to develop the centrifugal forces of the mind. Such development was the essence of the Greek spirit in education,

yet the modern spirit emphasizes even more than the Greek the relation to the fellowman, not merely in the political, but in every aspect. In fact, the essence of this spirit is service; in matters of the mind, it is intellectual altruism; in education, it is the training of the productive mind.

II

THE ART OF THE TEACHER

What are the forces which are essential to the productive mind, and what educational theory is most apt to develop them?

So far as intellectual progress is concerned, and I am not now discussing religious, moral, or physical progress, the first and most fundamental of these forces are in the nature of canons, or standards; they lie in the distinction of truth from error, in the appreciation of beauty and fitness, and in the application of these standards to thought. Together with our standards come our sources of knowledge, and there arises, as the first, that of learning from the stores of tradition, from books, and the experience of man in our own and previous generations; there follows close, as the distinctively nineteenth-century source of knowledge, that of direct observation of men and of nature. Then, for the testing of our knowledge, there is applied the triumphant crucible of human reason. Then our standards, our knowledge, and our reason seek expression in spoken and written language. Finally, as the supreme human, most closely approaching the superhuman power, the six preceding forces lead to the production of new ideas and to all the forms of original activity. This is the epitome at once of the "universal," both in intellect and in education.

Truth, beauty, learning, observation, reason, expression, and production, in their most comprehensive forms, are the seven forces of progress, and the *factors of education* are the processes of storage of these forces by coöperation of teacher and student, the former with his constantly diminishing, the latter with his constantly increasing responsibility. The batteries become ready to discharge, the potential intellectual energies

ready to be liberated; and the cunning business or art of the teacher consists in patience and alertness in ways, means, and methods, in repairing or supplying deficiencies, and discovering powers which are never actually to be idle. As Eduard Suess, the distinguished Austrian geologist, recently observed in his farewell lecture: "And now I have reached the comma. When I became a teacher, I did not cease to be a student; and now that I cease to be a teacher, I shall not cease to be a student, as long as my eyes see, my ears hear, and my hands can grasp. With this wish, I do not step out, but take up my former position."

Looking for a moment to our social obligations, it would appear possible to cultivate the first five of these forces in a monastic existence totally without benefit to one's fellowmen; to acquire "liberal culture" without effect or result, except for its possessor; to attain an individual mastery of truth and beauty, of learning, of observation, and of reasoning as purely receptive or centripetal powers. In contrast, the last two forces of expression and production are the centrifugal applications of knowledge, by their very terms altruistic and marking the purpose of education, the service of our fellows in commerce, in art, in politics, in literature, in scientific discovery, in every form of human activity.

To learn to produce, to be of service, we must, with Huxley, discern to the full the special rôle of each factor and, at the same time, secure a balance. The balanced enforcement of the heptalogue is as essential to the perfectly educated man as the balanced working of the great system of organs is to the ideal bodily development.

The attainment of symmetry will always baffle us, because of the generally inborn or constitutional asymmetry of mind; because of the limitations and predispositions of pupils and students, one having the gift for truth, another for beauty, another for learning, another for observation, another for reason, another for expression, another for creative production, and the many having no special gifts whatsoever. Only rarely are the largest number of these gifts in the largest measure combined in what we call the youth of genius, and only that

educator will rightly serve his calling who holds in his charitable heart this law of the mental variability of the race, who suspects the existence of talents out of the direct line of his own sympathies, who hopefully foresees that the dunce in mathematics may become the brilliant biologist, that the defective memory may be housed in the same brain with the keen reasoning power, that the deficient linguist may metamorphose into the brilliant observer, that the listless youth of eighteen may exhibit the spirit of the daring explorer at thirty, that the Rowland who leaves the small New England college in disgust may become the leading American physicist, that the Darwin who loiters thru Cambridge may revolutionize the thought of the world. Even my own experience with students yields instances of an inborn predilection for a certain subject working a marvelous metempsychosis. A careless student, in the search for an elective involving the irreducible minimum of effort, perhaps by the toss of a coin, elects a subject which, because of an atavistic, tho previously unsuspected, impulse, fascinates and transforms him for life. Herein lies often the failure of the more rigid and restricted curriculum, and the success of the miscellaneous fire of many electives or aimless discontinuity of studies, that among the repeated shots one may hit the bull's-eye of intellectual predisposition, and thus discover the man.

By focusing our attention upon each in turn in the light of the wisdom of our own and preceding centuries, we may best discover the special parts played by each of the seven factors of education, individually ineffective, collectively an irresistible power.

Factors of truth and beauty

"Again, many of you think it is not only a waste of time but a positive sin to read novels and poetry and general literature, to cultivate in any way the imagination, to take an interest in painting or sculpture or music. You have yet to learn that altho parrots and other imitative animals can get on without imagination, there is no such thing in existence as an unimaginative scientific man. That you have some imagination and individuality is evidenced by your differentiation from all other students of science classes; but have you these well developed, and have you those other

qualities which are absolutely necessary for the success of a scientific worker? Imagination is far and away the most important; but there are also judgment and common sense, and the love of truth and the power of self-sacrifice, which seem always to accompany the pursuit of science."⁴

The divine order of truth and beauty, as conceived by Plato, is at the foundation of all things and forms the soul of education, for a truthless education is fruitless, and an education without the sense of beauty and harmony fails, both of its imaginative elements and of its full effect on other men. The inspiration of these standards and basal guiding qualities is thru religion, the study of the beauty and harmony of nature, of classical and modern literature, of art, led by the personal influence of men of culture and productive capacity.

Intellectual virtue, the truth canon, the first ingredient of education, must be derived from some source or other. Virtue and knowledge do not necessarily run on all fours, many conspicuous instances could be cited of their absolute divorce, and, with Huxley in his Romanes lecture, I am not hopeful of deriving moral qualities from the study of pure science. Such virtues are often derivable from religious ideals, but this is certainly not universally the case, because of the large ingredient of faith in religion.

It is aside from our present path to consider whether the æsthetic factor was more, or less, appreciated by mediævalists than by moderns. The art spirit has certainly suffered a decline since the Renaissance; the spirit of the Florentines was most nearly a revival of the Greek spirit which the world has seen. The sense of the beautiful, combined with the appreciation of natural law, as manifested in Leonardo da Vinci, enters into scientific, no less than into artistic education, and the cultivation of the imagination is as much the constructive basis of the physical sciences as of literature.

In the relative spheres of the essential union or separateness of ethical and æsthetic cultivation, we are again on debatable ground, as will be readily seen from the comparison of the Latin environment, abounding from childhood in æsthetic cultivation, while, perhaps, less insistent upon the element of

⁴ Inaugural address of Professor John Perry, *Nature*, October 23, 1902, p. 645.

truth, with the German, English, and American, in short, with Teutonic environment relatively deficient in the sense of beauty, while, perhaps more insistent on the element of truth.

The factor of learning

"With this close hold upon practical life and this constant interest in the politics of the world, especially of England and the United States, no one could be less like that cloistered student who is commonly taken as the typical man of learning. But Lord Acton was a miracle of learning. Of the sciences of nature and their practical applications in the arts he had indeed no more knowledge than any cultivated man of the world is expected to possess. But of all the so-called 'human subjects' his mastery was unequalled. Learning was the business of his life. He was gifted with a singularly tenacious memory . . . the passion for acquiring knowledge which his German education had fostered ended by becoming a snare for him, because it checked his productive powers. It absorbed so much of his time that little was left for literary composition. It made him think that he could not write on a subject till he had read everything, or nearly everything, that others had written about it."⁵

The middle centuries were distinctively the period of learning; the great and enduring contribution of mediævalism to the world and to modern education was its insatiable thirst for information, for knowledge of the achievements of man, as set forth in books and book lore; for literature, and for the traditional science of the Greeks and Romans. As Harris aptly expressed it, "thru learning, we stand on the shoulders of all previous generations," and, figuratively speaking, the survival of mediævalism is only to be deplored in the one great feature of its faith, that a secure position on other men's shoulders is of paramount importance and constitutes an end, rather than a beginning and an accompaniment, of education.

The learned attitude is naturally the historian's attitude toward education. We have cited above the late Lord Acton as a modern mediævalist of the highest type, of vast learning, of limited production, as a storage battery which rarely discharged, as a life illuminating our present contention. By way of contrast to Acton may be instanced, among historians, our own Fiske, Browning, Tennyson, Victor Hugo, and, above

⁵ Special correspondence of the *Evening post*, London, June 23, 1902; the *Evening post*, Friday, July 18, 1903.

all, Balzac, as pouring the forces of learning into expression, into the conversations, debates, and discussions of their men and women, or into the pages of history. In his brief, but great, preface to *Père Goriot*, in which Balzac lays bare the whole philosophy of *la comédie humaine*, he shows thoro conversance with the whole biological movement of his times, beginning with Buffon of the middle of the eighteenth century and ending with the famous discussions between Cuvier and St. Hilaire of the early nineteenth—all a matter of pure and well-digested learning. It may be said that his works fairly bristle with learning and knowledge, and that acquisition was one of the great elements of his genius. Similarly, Tennyson's *In memoriam* shows a remarkable comprehension of modern biology, in its many more open and more subtle allusions to evolution and heredity.

Our shelves are loaded with the books of unlearned men. I have in mind two remarkably original works of recent times; they have justly brought their authors great renown, yet they both fail at the critical point, where the authors extend from their specialties and attempt to reach out for broader conclusions in neighboring fields of knowledge—conclusions which are rendered totally invalid, almost ridiculous, thru deficiency in biological and anthropological learning.

Learning necessarily occupies a vast amount of time, and it is a false modernism which depreciates its place in education. How near-sighted are certain reactions against it; how absurd the fads of certain ultra-modern schools; how out of time the premature exclusive specialization; how inadequate the extreme laboratory system; even in the university, how futile to attempt to educate exclusively thru research.

As Emerson observes: Whatever force may have compelled us to education, we are always gravitating back to learning, to the accumulated knowledge of our subject, and this is one of the most striking phases in the self-education of men. We recall that Aristotle opens every disquisition with a review of all that was known and said by his predecessors, that this is the well-known method of introducing the doctorate thesis in Germany. We recall that Darwin, altho eventually more

learned in books than any scientific man of his generation, neglected book knowledge while at Cambridge, and, after becoming attracted to science by observation and discovering how largely it is necessary to draw from the recorded observations of others, was fairly forced back to book knowledge. Fine proofs these, that the teacher should fairly "stoop to conquer," that he should fascinate the student with the spirit of some principal subject, that interest once enlisted, the value and necessity of book knowledge become apparent.

The factor of observation

"You know much of what has been done, but have you the power to discover, to add to the world's knowledge? Your knowledge has been derived from books and lectures; you have now to learn that a week in the laboratory, during which you seem to crawl, during which for examination purposes you do less than in reading ten lines of a text-book, is really of more value to your scientific education than a month's hard reading. This is almost unbelievable to you who are such adepts in passing examinations, yet it is quite true. Lectures and lessons have spoon-fed you until now; lectures and lessons will in future teach you to feed yourselves."⁶

"But how willingly I would as a poet exchange some of this slumbering, ponderous, helpless knowledge of books, for some experience of life and man."⁷

Schopenhauer's premiss that "All truth and wisdom lie ultimately in observation," we find reflected in the lives of men of science and of letters—a very thirst for transition from book learning to original and direct observation of men, of facts and things, of nature, as inexhaustible sources of new knowledge. The reciprocal relations, or the actions and reactions, between learning and observation are wonderfully illustrated in the life of Pasteur—the noblest scientific life recorded. Again, when young Ramon y Cajal, while a medical student, found in works of reference no citations from his own countrymen, he resolved that, if it lay in his power, at least one Spanish name should appear in the history of medicine of the future and remove the reproach of Spain. He threw himself with ardor, not into deeper and more extensive learning, but into the observation

⁶ From abstract of inaugural address of Professor John Perry, *Nature*, October 23, 1902, p. 645.

⁷ Elizabeth Barrett Browning to Robert Browning, March 20, 1845.

of the nervous system by means of a method which had just been discovered by the Italian histologist Golgi, and with such success that in the course of a few years every anatomical treatise quoted the brilliant discoveries of Cajal from the ancient University of Cordova.

This truism, that the world holds its own by learning, that it moves forward by observation, is the distinctive gift of the scientific spirit to education. It has not yet become a truism of educational practice. Quick and keen in children, undoubtedly inherited from our very remote ancestral life, where powers of observation were factors in survival, this faculty was unrecognized in the mediæval system of education, and is also unknown to the college which ignores the element of observation in its requirements, both for admission and for honors at graduation. It is, therefore, largely ignored in the school which prepares for the college—a condition of things which, however, is widely perceived and rapidly being remedied in the public secondary schools of this country. Here I may quote from a noteworthy recent address by the headmaster of one of the most successful colleges of England:

“A school preparation should be of a kind which will foster the desire and develop the power to overcome difficulties; it should give self-reliance and sufficient knowledge of scientific principles to enable the pupil in after life to understand changing conditions and see their trend. Above all, school work should encourage the spirit of inquiry, which finds delight in making new observations and experiments with whatever resources are available. The principle upon which Humboldt constructed Prussian education a century ago was: whatever we wish to see characteristic of our nation we must first implant in our schools. Assuredly, if we would prepare our scholars for life, the supreme intellectual preparation is found in methods which evoke the faculty, the originality, the mental resourcefulness of our pupils. It is for us to see that the subjects and methods of teaching in our schools are such as to promote the development of these qualities, for national progress depends upon them.”

School and college should, from the outset, foster this most fertile of natural faculties. Postponement of observation to the graduate school, where it naturally enjoys its maximum cultivation, is a hazardous experiment, because of the law of degeneration of unused mental powers. What we observe is

less vital than that we do observe, and the introduction of science in the school should be less for knowledge and learning than for facility in vision and elementary reasoning. Observable material is what is called for; not always the same material, neither is it necessarily in the scientific; it may be in the poetical, literary, classical sphere. In the social world, the young observer is most admirably advised by Montaigne:

"This great world, which some do yet multiply as several species under one genus, is the mirror wherein we are to behold ourselves; to be able to know ourselves as we ought to do in true bias. In short, I would have this to be the book my young gentleman should study with the most attention . . . so the several fragments he borrows from others, he will transform and shuffle together to compile work that shall be absolutely his own; that is to say, his judgment, his instruction, labor and study, tend to nothing else but to form that. He is not obliged to discover whence he got the materials, that have assisted him, but only to produce what he has himself done with them."

The factor of reason

"That man, I think, has had a liberal education, who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself."—HUXLEY.

Reason is the great asset of man. Granted the impulses of beauty, of truth, of knowledge, and of observation, there is still to be trained the efficient "logic engine" of thought, so wonderfully pictured by Huxley. George Meredith also speaks in inimitable style of the relation of observation to reason and discrimination:

"Observers of a gathering complication and a character in action commonly resemble gleaners who are intent only on picking up the ears of grain and huddling their store. Disinterestedly or interestedly they wax over-eager for the little trifles, and make too much of them. Observers should begin upon the precept, that not all we see is worth hoarding, and

that the things we see are to be weighed in the scale with what we know of the situation, before we commit ourselves to a measurement. And they may be accurate observers without being good judges. They do not think so, and their bent is to glean hurriedly and form conclusions as hasty, when their business should be sift at each step, and question."

Nature is not over-liberal with this asset; she often richly endows with all other forces while most parsimonious with this. Two of my older scientific colleagues, most learned, most gifted observers, profound students, able writers, and prolific producers, were yet almost devoid of the power of sound logic. On one occasion, after examining their joint advocacy of a certain theory, which I myself strongly entertained at the time, I could not help remarking, "Heaven preserve us from our friends!" Scientific common sense, or the absence of it, is congenital; it comes from our forebears or from that strange benefactress—the saltation in heredity.

If not inborn, this break in the ranks must be perceived and, so far as possible, repaired by the teacher, certainly one of the most difficult, if not most hopeless, of tasks. The induction into correct thinking is not only in formal logic, in philosophy, in the history of the sciences—more especially where taught by personal contact and discussion between master and student—but in the continuous exercise or practice of reasoning by the student himself, guided by kindly, but expert, criticism of the master in every branch of original thinking. Here is where mathematics and the natural sciences make their most effective contributions to education, in affording the data for reasoning from problem to solution, or from cause to effect, in its simpler forms. There is no abbreviated formula for reading nature or men at sight: the invention of the guesses that make an hypothesis, the trials of the hypotheses that make a theory, and the discarding of the theories that fall for a truth; in brief, the unerring scent on the track of new truth can only be acquired by the method of trial and error, guided by skillful and ingenious advice.

The factor of expression

"For my part, I venture to doubt the wisdom of attempting to mold one's style by any other process than that of striving after the clear and

forcible expression of definite conceptions, in which the Glassian precept, 'First catch your definite conceptions,' is probably the most difficult to obey. But still, I mark among distinguished contemporary speakers and writers of English, saturated with antiquity, not a few of whom, it seems to me, the study of Hobbes might have taught dignity, of Swift concision and clearness, of Goldsmith and Defoe simplicity."—HUXLEY.

"All men stand in need of expression. In love, in art, in politics, in labor, in games, we study to utter our secret. The man is only half himself, the other half is his expression."—EMERSON.

Why, with Lycidas, "shun delights and live laborious days"; why acquire the canons of truth and taste, the familiarity with achievement, if you cannot bring forth discoveries and ideas which may have cost you an infinite amount of labor, if you have not the power of expression in language, drawing, painting, sculpture, architecture, or other forms of design?

While considering expression as covering every form of the conveyance of ideas to others—here we may speak only of the written form.

The gist of Huxley's famous sentence, quoted above, is that *ideas, practice, and the native literature are the three chief factors* in the cultivation of style. In language, look to the best lay writers of England, to Huxley himself, as well as to the uniformly fine style developed in France, and avoid Germany as you would avoid a labyrinth or a quicksand.

The mediæval spirit instilled in prejudice to the mother tongue, was manifested in the writing of the Bible and all works of science in Latin; it survives in over-reliance upon Latin and Greek in the cultivation of the art of expression. In this day, when two great exponents of English style, Huxley, with little early classical training, and Tyndall, chiefly of scientific education, stand shoulder to shoulder with two other masters of prose, Maurice and Goldwin Smith, both of classical education; when Darwin and Galton are models of simplicity and clearness, we cannot believe that there can survive a classical monopoly for the acquisition of style. Latin is said to be enjoying a great revival in the secondary schools of America, but the classics, as generally taught with us, fail to have the productive and constructive value in expression which is enforced in England, where style is cultivated and developed

by a constant interchange of classical and English expression. At Eton, for example, the training culminates in the ability to put a *Times* editorial into Greek or Latin. With us, the chief régime of classical preparation consists in translation, parsing, translation; and in truly mediæval spirit some of the most progressive colleges have been piling up "reading" requirements, in raising the standard of admission. As the entrance examination approaches, translation increases in quantity and intensity, for two years there is a long and arduous cram, until the average student becomes fairly surfeited with the very masterpieces of literature and as thoroly cured of any taste for the classics as the Israelites were of any partiality for manna. The transfer of a large proportion, if not of the entire classical training from the culture period of college life to the more purely disciplinary period of school life, is also one of the most conspicuous illustrations of what has been spoken of above as retrogression in the guise of progress.

Happily, however, expression is the one direction in which a substantial advance has been made in American college education in the last two decades. Under wise leadership, in this art we far outclass the Germans, but still lag behind the French. If we are gaining expression, all the more need to follow more ardently the "Glassian precept" to gather our ideas and harvest our observations, so that we may bring them forth into the final stage of original production.

The factor of production

"I do not propose for a moment to invite you to blink the fact that our huge Anglo-Saxon array of producers and readers—and especially our vast cis-Atlantic multitude—presents production uncontrolled, production untouched by criticism, unguided, unlighted, uninstructed, unashamed on a scale that is really a new thing in the world. It is all a complete reversal of any proportion, between the elements, that was ever seen before."—*The Lesson of Balzac*, HENRY JAMES.

The stirring appeal and command of Carlyle for production should be carved in stone over the portals of every school, college, and university, and embodied in the precepts of every teacher, because production, as our foremost intellectual service

to God and to man, and as the end of the whole educational system, should be prepared for by instilling the true modern spirit into every course in school and college.

The word is used advisedly for all activities of the artisan, as well as of the artist, because there are as many who can produce in some form as there are few who can create.

The vast majority of men are born consumers; there are few who are either instinct with the desire to produce or who have had the vast hiatus between consumption and production impressed upon them. Many clever people fail to grasp the distinction; in the metropolis of America, for instance, we consume vast quantities of the foreign intellectual product, the music, the art, the literature; and the metropolitan, in his heart, thinks that we are a musical, an artistic, or a literary people; whereas, we may lay small claim to any one of these attributes until, in these commodities of the mind, our exports equal or exceed in quality our imports.

There is in America at large, outside of the great field of mechanical endeavor, a singular blindness to the supreme importance of productive and creative work, to the fact, as Henry James observes, that the quality of our production in philosophy, politics, political administration, in law, medicine, literature, in pure or applied science, in whatever you will, is the one absolute criterion of the nation's intellectual standing. As a recent writer has said, invention abounds, discovery is rare; the inventor enjoys a national reputation and a niche in the Hall of Fame; the discoverer often enjoys an undisturbed obscurity, and looks for his recognition, not in his own country, but in the older countries of Europe, where the value of discovery is appreciated.

There is a similar blindness, even where there is less excuse for it, in our schools, colleges, and universities, as to the prolonged, broad, and profound training which must precede and accompany production in any branch of human endeavor. Again, we may quote from Suess's farewell address:

"In the course of the years I have seen and experienced much. In the beginning a man has honestly to endeavor with zeal, and with certain restrictions upon himself, to learn the detail; and sometimes the hair whitens

before he is in a position to obtain a general view and to risk a first synthetic attempt. This first step to synthesis is, however, the deciding step in the life of the inquirer. Soon he notes that his judgment obtains more consideration among his collaborators; he becomes more careful and conservative with the same; and finally the hour arrives in which his soul is filled with the highest satisfaction, because he has been able to add to human knowledge some new view or a new fact—a feeling over against which everything naturally vanishes that the outer world is able to offer in acknowledgment."

The initial step in the schooling for production is what is familiarly known as the original exercise, which may begin in the kindergarten and terminate in the most advanced laboratory—the whole centrifugal process is the same in kind, while it differs infinitely in degree. In classics, it is the turning of English into Latin and Greek; in mathematics, it is the original problem; in English, it is the theme; in science, the induction from the observed experiment, however simple; in brief, it is the outflow from the mind, rather than the inflow to the mind; the acquisition of the centrifugal, rather than the centripetal power. Thus are taken the rudimentary, the intermediate, as well as all the successive steps from the simplest to the very highest grades of production. I fancy the instinct that this is the real purpose and end of education has been the more or less unconscious inspiration of every great teacher of all time. It is the most difficult part of education. It is the point where students rebel most. It is the point where the largest number of teachers fail. It is the method which is most difficult to prescribe. It is the fine memory bringing the highest collegiate honors and standing, combined with the inability to produce, which results in the barren after-life and wonder as to the worth of the first diploma. It is far easier to compel a student to read six books of Homer than to train him to turn one page of English properly into Greek; it is far easier to learn by rote Tennyson's *In memoriam* than to produce one line worthy of a place in that great poem; it is far easier to memorize Darwin's entire *Origin of species* than to devise a single new biological experiment of real value.

Efficiency, constructiveness, productiveness are the ascending democratic species of the aristocratic genus creation. There

are corresponding gradations in the training of the efficient man, of the constructive man, of the productive man, leading to that of the creative man—the same in kind, but of great difference in degree. The grade is always determined by the nature and response of the mind itself to the opportunities or intellectual and social environment which is offered to the mind.

Even the centripetal system of education cannot crush out the passion for creative work which is born in some men and women, but since the mission of education is itself production, it must produce the producers, it must discover them and train them to the highest, as well as to the intermediate or the lower, planes of creative work. Once inoculated with this virus, education enjoys a new vitality, an immunity to ennui; the centrifugal power, inborn or instilled, turns into those channels which taste and opportunity unfold; into science, literature, theology, law, medicine, commerce, manufacture, politics. Conceit is checked and humility engendered by learning what has been achieved, and the supreme difficulty attending achievement.

What I am contending for is that the *one absolute essential* in all education is to hold out the centrifugal life of originality, of efficiency, of construction, of production, of creation, as the chief end of education, rather than to make any of the subsidiary factors, such as intellectual morality, or learning, or reasoning, or the cultivation of taste, or the power of expression, ends in themselves.

Let master and student be impatient of the systems which postpone production until after years of learning and acquisition thru brilliancy of memory give a false sense of power. Rather from the outset learn and think to do. Be not impatient of the slowness of the process of acquiring either the power of production or of the many complex factors which enter into it.

This is an outline of the universal principles which illuminate the largest, as well as the most detailed, problems of education.

Whatever the grade of instruction, whatever the subject, whether in science or literature; whatever the choice of profession, we may always find our path lighted by the same signals, and ask whether a symmetrical development of the seven factors is being brought about. Every great subject has within it the possibility of developing the seven factors, but a combination of subjects, selected with reference to their special influences, may bring about this development to the greatest advantage, for there are studies to stimulate the imagination, others to develop the memory and power of learning, others to facilitate observation, others reason, and so on. The universal illuminants remain both as the guide and the single basis of criticism of the teacher, of the course, of the curriculum, of the institution, of the student himself, of his most elementary thoughts, and of his most advanced original contributions.

HENRY FAIRFIELD OSBORN

COLUMBIA UNIVERSITY

VII

THE POLICY OF THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING

In all European countries where education is liberally supported, the teacher's compensation includes the retiring pension; and in the more enlightened countries, like Germany, pensions are provided for the widows and orphan children of the teacher. This provision grew out of the conviction, which came from long experience, that to induce strong and able men to enter and to remain in the calling of the teacher, the privations due to small income must, in some measure, be counter-balanced by removing the uncertainty in regard to provision for old age and the support of those dependent upon the breadwinner.

For some years past there has been a growing conviction in America that the time had come for the establishment in our American system of education, both in the colleges and in the public schools, of a similar provision. More and more the work of the teacher has been handed over in the public schools to women who have accepted small pay, while men have sought more remunerative employment. Even in the institutions of higher learning, inducements to outside work have grown relatively stronger; and the difficulties which come with rising prices to the man with modest income have borne upon no class more than upon professors and teachers. Few of these receive a sufficient sum of money to support a family and make provision for old age; and it has become increasingly clear in the past decade that the disadvantages which attach to the calling of the teacher by reason of the small salaries paid must, in some way, be offset by a removal of the uncertainty of provision for old age and disability, if strong and ambitious men are to be drawn in sufficient numbers to that profession.

It was a recognition of this condition in American education which induced Mr. Andrew Carnegie to make his notable gift of April 16, 1905, for the establishment of a system of retiring pensions in the higher institutions of learning in the United States, Canada, and Newfoundland. "I have reached the conclusion," he wrote, "that the least rewarded of all the professions is that of the teacher in our higher educational institutions. New York City generously and very wisely provides retiring pensions for teachers in her public schools, and also for her policemen. Very few indeed of our colleges are able to do so. The consequences are grievous. Able men hesitate to adopt teaching as a profession, and many old professors, whose places should be occupied by younger men, cannot be retired."

Mr. Carnegie's gift aroused the deepest interest amongst all friends of education; but, naturally, amongst teachers it was received with the heartiest appreciation, and they have waited with keen expectation the announcement of a definite plan for its administration.

The board of trustees chosen by Mr. Carnegie to administer this trust is composed of twenty-two presidents of colleges and universities and three business men. Nearly all of the college men who make up the majority of this board have spent the greater part of their lives as teachers, and have naturally, therefore, the most genuine appreciation of the economic problem which the teacher faces. It will be their wish and their mission to so administer this great trust as to make it count, in the highest possible degree, for the cause of the teacher and of higher education.

By an Act of Incorporation, approved by the President, March 10, 1906, these trustees have been incorporated by Congress under the name of the Carnegie Foundation for the Advancement of Teaching, a name which indicates, approximately at least, the purposes for which the corporation is formed. These are clearly stated in the Act of Incorporation itself, as follows:

The objects for which said corporation is incorporated shall be—

(a) To receive and maintain a fund or funds and apply the income thereof as follows:

To provide retiring pensions, without regard to race, sex, creed or color, for the teachers of universities, colleges, and technical schools in the United States, the Dominion of Canada, and Newfoundland, who, by reason of long and meritorious service, or by reason of old age, disability, or other sufficient reason, shall be deemed entitled to the assistance and aid of this corporation, on such terms and conditions, however, as such corporation may from time to time approve and adopt: Provided, however, That the said retiring pensions shall be paid to such teachers only as are or have been connected with institutions not under control of a sect or which do not require their trustees, their officers, faculties, or students (or a majority thereof) to belong to any specified sect, and which do not impose any theological test as a condition of entrance therein or of connection therewith.

(b) In general, to do and perform all things necessary to encourage, uphold, and dignify the profession of the teacher and the cause of higher education within the United States, the Dominion of Canada, and Newfoundland aforesaid, and to promote the objects of the Foundation, with full power, however, to the trustees hereinafter appointed and their successors from time to time to modify the conditions and regulations under which the work shall be carried on, so as to secure the application of the funds in the manner best adapted to the conditions of the time.

In a word, the object of this foundation is to bring into the academic life the principle of the retiring pension for the professor and his widow as a part of the American educational system, so that the teacher may receive his retiring allowance, not as a charity, but as a matter of right. To establish this principle is to raise the plane of academic life, to add to the teacher's calling a greater security, to lift from his shoulders the most worrying load which he bears, making it possible for men to throw themselves heartily and unreservedly into the work of the teacher, knowing that old age or ill-health will not leave them helpless. To establish this principle and to dignify and advance the cause of the teacher and of higher education is the object of the Carnegie Foundation for the Advancement of Teaching.

The practical question which at once faces the board of trustees is this: With an income of \$500,000 a year, what is the wise method to pursue to accomplish the ends, just mentioned?

Some idea of the problem may be gained by a brief survey of the educational situation. This is a gift to the universities, colleges, and technical schools of the three English-speaking countries of North America. There are in these countries

something more than seven hundred institutions calling themselves colleges or universities. No data are available which show with any accuracy the financial support of the teacher in all these institutions. Indeed, it is difficult to obtain such data in all cases. For example, in most of the Roman Catholic colleges the teaching is done by priests, who receive no fixed salaries; and in many of the smaller institutions salaries are contingent on the tuition fees received. The following table will show more completely than any data heretofore brought together the financial status of the average college and of the average professor. This table includes about one-half of the entire number of so-called higher institutions. In it every institution having a denominational connection, however loose, has been classed as denominational, while all institutions actually controlled by the state have been classed under that head:

PAY OF PROFESSORS IN AMERICAN COLLEGES

Class of institutions	Number of institutions	Total number professors	Total amount salaries	Average number in faculty	Average pay-roll in institution	Average pay of a professor
Denominational	218	2,802	\$3,305,930	13	\$15,165	\$1,180
State Institutions	58	1,461	2,617,210	25	45,120	1,787
Non-Denominational	51	1,944	3,708,220	38	72,710	1,907
	327	6,207	\$9,631,360			

This table shows that the average American college (and American is here always used in the continental sense) which is under denominational control has 13 members in its faculty, an average pay-roll of \$15,165, with an annual average salary for each professor of \$1180; that the average state institution has a faculty of 25 members, a pay-roll of \$45,120, and an average annual salary for each professor of nearly \$1800; and that the colleges having no denominational connection or control have, on the average, a faculty of 38 members, a pay-roll of \$72,710, and an average annual salary for a professor of \$1907.

In the aggregate, 327 colleges employ some 6200 professors, at a total annual compensation of \$9,631,360, or at an average annual salary of \$1550 a year for each professor. It will be

understood that in this exhibit are included only the salaries of professors of the various grades who are permanent members of the faculty. The pay of instructors and assistants, whose appointments are usually temporary, is not included, nor are they considered in the pension scheme.

It is clear that an income of \$500,000 could not maintain an adequate pension system in these hundreds of institutions, whose annual pay-roll amounts to nearly ten millions of dollars; and that, if the principle of the retiring pension is to be brought in as a part of the academic life, it can be done only by administering the fund along some line of consistent policy, and not as a charity. The trustees have, after careful consideration, adopted the following principles for their guidance in the administration of the trust:

1. By the terms of the letter of gift of the founder and by the Act of Incorporation which is based upon that letter, this is a gift to higher education. It is to be used, therefore, for the teacher in the higher institutions of learning and is not available to teachers in high schools, seminaries, academies, or other institutions of an academic grade lower than that of a college.

2. Being a gift to institutions of higher learning, the administration of the fund raises at once the question: "What is a college?" For the term college has no distinct meaning in the United States and Canada, applied as it is to institutions varying so greatly in equipment and entrance requirements. The seven hundred institutions calling themselves universities and colleges are in no sense comparable. They include many which are universities or colleges in name only; these titles having been adopted by ambitious institutions in very much the same way that the title of colonel is adopted by certain individuals. To recognize all of these without discrimination as institutions of higher learning would be to abandon any fair standard for the high school or for the college.

The trustees of the Carnegie foundation have, therefore, adopted for the present an arbitrary definition of a college, which is that now in use under the revised statutes of the State of New York:

An institution to be ranked as a college, must have at least six (6) professors giving their entire time to college and university work, a course of four full years in liberal arts and sciences, and should require for admission, not less than the usual four years of academic or high school preparation, or its equivalent, in addition to the pre-academic or grammar school studies.

In addition to these academic qualifications, it is now clearly recognized that an institution, in order to do fairly the work of a college, must have at least a minimum of endowment, and the trustees have voted that, to be recognized as a college for the purposes of the foundation, an institution must have a productive endowment of not less than \$200,000. These standards are modest ones, both from the intellectual and the material standpoint; and to require less of a college would seriously impair the ideal of both the college and the high school.

3. The Act of Incorporation bars from participation in the benefits of the fund all institutions under denominational control. Notwithstanding the definiteness of the language there used, the decision of what constitutes denominational control is not easy. There exist today amongst the seven hundred colleges and universities of the three countries interested all possible grades of denominational control or connection. In its extreme form this control involves the absolute ownership of the institution and the appointment of the officers and faculty. In its weakest form it represents little more than a friendly relation between a denomination and an institution, shown, perhaps, by the appointment of an annual visiting board. In nearly all cases, however, whether the control be of the strict or of the loose kind, it results in the choice of a board of trustees composed almost entirely of members of a specified denomination. At just what point between these extremes of denominational connection an institution may be recognized as free of denominational control is not easy to say. In this matter the trustees will go slowly, seeking to deal with the whole matter, not only in a generous spirit, but with the purpose to carry out justly and fairly the provisions of the Act of Incorporation. Institutions will be admitted as eligible to the benefits of the foundation, so far as denominational control is concerned, under the following condition :

1. Universities, colleges and technical schools of requisite academic grade, not owned or controlled by a religious organization, and whose acts of incorporation or charters specifically provide that no denominational or sectarian test shall be applied in the choice of trustees, officers or teachers, nor in the admission of students.

2. In the cases of institutions not owned or controlled by a religious organization, and in which no specific statement concerning denominational tests is made in the charters or acts of incorporation, the trustees of such institutions shall be asked to certify by a resolution to the trustees of The Carnegie Foundation for the Advancement of Teaching, that, notwithstanding the lack of specific prohibition in the charter, "no denominational test is imposed in the choice of trustees, officers or teachers, or in the admission of students, nor are distinctly denominational tenets or doctrines taught to the students."

4. The question as to the admission of state institutions to the benefits of the foundation has been left to be decided at the annual meeting of the trustees in November next, and its discussion can be safely left until that time. From the standpoint of education there are serious objections to the recognition in a state like Wisconsin, for example, of a modest college and the omission of the great state university which is the real center of higher education. On the other hand, an important question of general public policy is involved when a private agency steps in between the state and an institution which the state has founded and controls. For nearly a half-century the great state universities in the Central West have labored to establish the principle that higher education in their respective states is to be maintained by the state itself. This principle has been established, and these universities are soon to be in possession of the largest incomes which any institutions in America receive. The state may, therefore, fairly be expected to provide a retiring pension system for its own professors.

5. The scale upon which the retiring allowance should be fixed is one requiring careful consideration. It is evident that a uniform percentage of the active pay of a professor does not form a just scale for computing retiring allowances. For example, 50 per cent. of a \$5000 salary may furnish a decent retiring allowance; but to give to a professor who has taught for many years efficiently and faithfully on a salary of \$1200 one-half of that amount would scarcely tend to dignify and

advance the profession of the teacher. The trustees have therefore adopted a scale of retiring allowances, under which men receiving small pay obtain a much larger proportion of their active pay. Thus a professor receiving \$1200 would receive a retiring allowance of \$1000, while a professor receiving \$5000 would receive a retiring allowance of \$2700. There can be no question, I think, of the justness and fairness of making the retiring allowance to some degree a function of the amount of the active pay itself.

6. In all foreign universities the pensioning of the widow and orphans of professors forms one of the most important parts of the system; and in the German universities there is a carefully regulated scale, which fixes the exact amount which the widow or orphans of a professor of a given tenure of service may receive. It is not possible, at this stage of our American college development to provide a pension system so elaborate. On the whole, the teacher will be most concerned for the wife who survives him; and, in the rules adopted by the trustees, it is provided that the widow of a professor may receive during her widowhood a pension of one-half that to which her husband was entitled.

7. In order that the retiring allowance may come to a professor in the regular performance of his duty as a matter of right and not as a charity, it is essential that he should receive it thru his own institution. The trustees of the foundation will therefore endeavor to recognize professors, so far as possible, thru the institutions themselves. Just what institutions will ultimately share in the benefits of the foundation cannot for some time be determined. A provisional list of those clearly entitled to do so will be announced in a short time, and to this accepted list additions will, from time to time, be made.

To a professor in one of these accepted institutions the retiring allowance will be awarded automatically. That is to say, once he has complied with the conditions, he will receive his retiring allowance immediately upon the application of his institution.

The trustees realize, however, that there are able and devoted

teachers doing unusual work for education in institutions which, by reason of lower entrance requirements, or for other cause, are not for the time admitted to the list of accepted institutions. Individual professors of great merit or of distinguished service in such institutions may be awarded retiring allowances by the trustees, but in such cases they will deal directly with the individual professor.

8. The grounds upon which a retiring allowance is granted are those of age, long service, or disability. Of these the ordinary normal grounds will be those of age or long service, and upon the following conditions:

1. *Age.*—To be eligible to retirement on the ground of age, a teacher must have reached the age of sixty-five and must have been for fifteen years professor in a higher institution of learning. Whether a professor's connection as a teacher with his institution shall cease at an earlier or later age than sixty-five, is a matter solely within the jurisdiction of the professor himself and the authorities of the institution in which he serves.

2. *Long Service.*—To be eligible for retirement on the ground of length of service, a teacher must have had twenty-five years' service as a professor in a higher institution of learning. It is not necessary that the whole of the service shall have been given in accepted colleges, universities or technical schools.

In no case shall any allowance be paid to a teacher who continues to give the whole or part of his time to the work of teaching, as a member of the instructing staff of a college or technical school.

At the meeting of the trustees of the foundation on April 9, 1906, the following rules for the granting of such normal retiring allowances were adopted, founded upon the principles which have just been named.

RULES FOR THE GRANTING OF NORMAL RETIRING ALLOWANCES

1. A normal retiring allowance is considered to be one awarded to a professor in an accepted university, college or technical school, on the ground of either age or length of service. The term professor, as here used, is understood to include Presidents, Deans, Professors, Associate Professors, and Assistant Professors, in institutions of higher learning.

2. Retiring allowances shall be granted under the following rules, upon the application of the institution with which the professor is connected, and in the application it should be clearly set forth whether the retiring allowance is recommended on the ground of age or service.

3. In reckoning the amount of the retiring allowance the average salary for the last five years of active service shall be considered the active pay.

4. Any person sixty-five years of age, and who has had not less than fifteen years of service as a professor, and who is at the time a professor in an accepted institution, shall be entitled to an annual retiring allowance computed as follows:

(a)—For an active pay of sixteen hundred dollars or less, an allowance of one thousand dollars, provided no retiring allowance shall exceed ninety per cent. of the active pay.

(b)—For an active pay greater than sixteen hundred dollars the retiring allowance shall equal one thousand dollars, increased by fifty dollars for each one hundred dollars of active pay in excess of sixteen hundred dollars.

(c)—No retiring allowance shall exceed three thousand dollars.

5. Any person who has had a service of twenty-five years as a professor, and who is at the time a professor in an accepted institution, shall be entitled to a retiring allowance computed as follows:

(a)—For an active pay of sixteen hundred dollars or less, a retiring allowance of eight hundred dollars, provided that no retiring allowance shall exceed eighty per cent. of the active pay.

(b)—For an active pay greater than sixteen hundred dollars the retiring allowance shall equal eight hundred dollars, increased by forty dollars for each one hundred dollars of active pay in excess of sixteen hundred dollars.

(c)—For each additional year of service above twenty-five, the retiring allowance shall be increased by one per cent. of the active pay.

(d)—No retiring allowance shall exceed three thousand dollars.

6. Any person who has been for ten years the wife of a professor in actual service may receive during her widowhood one-half of the allowance to which her husband would have been entitled.

7. In the preceding rules, years of leave of absence are to be counted as years of service, but not exceeding one year in seven. Librarians, registrars, recorders, and administrative officers of long tenure, whose salaries may be classed with those of professors and assistant professors, are considered eligible to the benefits of a retiring allowance.

8. Teachers in the professional departments of universities whose principal work is outside the profession of teaching are not included.

9. The benefits of the Foundation shall not be available to those whose active service ceased before April 16, 1905, the date of Mr. Carnegie's original letter to the Trustees.

10. The Carnegie Foundation for the Advancement of Teaching retains the power to alter these rules in such manner as experience may indicate as desirable for the benefit of the whole body of teachers.

How well these administrative regulations will operate in the actual work of the foundation can only be told after some experience has been had. In the first steps which are to be taken, the trustees are proceeding with great care. It requires only brief consideration to show that the establishment of the principle of the retiring pension as a part of the

American academic life is of vastly greater importance than the granting of pensions at random in the numerous institutions thruout this wide area. In the one case the administration of the trust becomes a definite and well-considered effort to dignify and to advance the profession of the teacher and the cause of higher education; while the other plan would make of the foundation a charity, worthy indeed in itself, but one quite as likely to do harm rather than good to the cause of education and to the profession of the teacher. There have been in the past of American education comparatively few agencies whose work it was to consider education from any other than the local standpoint. Generally, devotion to education in this country has meant devotion to the cause of a particular institution. For the first time there has been here formed a board of trustees, composed in the main of college teachers drawn from the whole country, whose business it is to administer a great fund for education along national and even international lines. In the effort to make this wise gift serve a truly wise and far-reaching purpose, the trustees count that they will receive a hearty coöperation and, at least, a patient hearing from the American teacher.

HENRY S. PRITCHETT

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING,
NEW YORK

VIII

DISCUSSIONS

MODERN TREND OF PHYSICS TEACHING

The EDUCATIONAL REVIEW for March, 1906, contains an article from Professor Woodhull of Teachers College, Columbia University, which is in part a sweeping indictment of the school teaching of physics, as it is now conducted under the influence of the requirement maintained by the College Entrance Examination Board. On this paper I wish to make some comments.

If there are any teachers who confine their teaching to drill on the thirty-five laboratory exercises, or who do not give much attention to qualitative experiments performed in the presence of the pupils and to interesting applications of the facts and principles illustrated in the laboratory, I have not much to say in their defense, except this: that they may have too little time and too little lecture-room apparatus, and that they will probably grow wiser as they gain experience and strength.

But is the general character of the work laid out in the course under discussion, for which, I understand, Professor Woodhull holds college men chiefly responsible, fundamentally wrong from the point of view of the needs of school pupils? He seems to think so, and his opinion, backed by his experience and his position as a teacher, must have carried much weight in an assembly like the Schoolmasters' Association, wherein there were few, it is likely, of equal experience in the same field of teaching. But, in estimating the value of this opinion, it is fair to ask whether it has been formed and expressed in a judicial spirit, and, for the purpose of answering this question, I shall now quote and comment upon a part of one paragraph in his article, taking consecutive sentences:

"A great ado is made about getting the specific gravity of wood. All wood is heavier than water, but they set out to

prove that a certain block is half as heavy as water. It floats on water for the same reason that an empty bottle floats. If we let the water enter and drive out the air, both sink." A little farther down in this paragraph, Professor Woodhull speaks with contempt of "academic discussion." Now, can anything be more academic in the bad sense than the statement, given as an objection to experiments on the practical specific gravity of a given block, that "all wood is heavier than water"? Further, let me ask what teacher sets out "to prove that a certain block is half as heavy as water"? If he teaches in accord with the spirit, or even the letter, of the thirty-five-exercise course, he sets his pupils to find out what is the practical specific gravity of the block in question, whether this be 0.50, or 0.80, or anything between these values. But, says Professor Woodhull, "It makes a difference whether the wood comes from inland or seashore; from the north side of a hill or the south side; whether it is green or kiln-dried; whether it is summer or winter." Very true and very interesting, but very inconclusive, not to say illogical, as an argument against a practical study of the methods of finding specific gravity. Professor Woodhull goes on, "In winter our closet doors shrink so that we can poke our fingers thru. In summer they swell so that we cannot shut them. They try to coat the block of wood with paraffin, so that air shall not get out or water get in. No one has yet learned how to keep wood from shrinking and swelling." Very well; does not the fact that the pupil is working with a block soaked with paraffin (not "coated"; I am sorry that Professor Woodhull gives even a left-handed indorsement to the lazy practice of coating with paraffin) give opportunity and reason for instructive remarks on the merits of various methods of "water-proofing" wood. He says next, "The pupils, who are often wiser than doctors of philosophy, know that their teachers are making a pretense of getting the specific gravity of this block of wood merely for the sake of an academic discussion." No, not merely for this purpose, as I have already indicated; but largely, very largely, I must admit, the object of these exercises on flotation and specific gravity is to give some quantitative

basis of experience for a vital knowledge of certain fundamental principles of flotation. These principles, whether "academic" or otherwise, are the essentials for the intelligent design of all things that are to float. The discovery of one of them, and the picturesque circumstances which attended this discovery, are the chief title of Archimedes to the fame which has survived him more than two thousand years. The neglect of one or two of these elementary principles by the makers of life-preservers cost the lives of hundreds of persons two or three years ago in the waters adjacent to New York City.

I might quote and criticise Professor Woodhull further; but enough has been said, I think, to show the intemperateness of his attack on the general plan of the College Entrance Requirement in Physics. His paper contains many suggestions which should be of value to teachers who are working in general accord with this requirement, and who, following these suggestions, might work in more complete accord with it. His unfortunate mistake, especially unfortunate because of the large number of prospective teachers of physics who come directly under his influence, lies in a failure to recognize and to foster what is good in the present teaching of physics, while using every effort to improve and liberalize that teaching.

It is possible that the physics requirement of the College Entrance Board is somewhat less liberal than that adopted by the National Educational Association. The former calls for "many and varied numerical problems"; the latter does not mention numerical problems, tho it is doubtless meant to include them. The former specifies "instruction by lecture-table demonstrations, to be used mainly as a basis for questioning, upon the general principles involved in the pupils' laboratory investigations"; the corresponding statement in the latter is "with qualitative experiments by the instructor, elucidating and enforcing the laboratory work, or dealing with matters not touched upon in that work." But each requirement aims to have the pupil gain "a comprehensive and connected view of the most important facts and laws in elementary physics."

I do not maintain that any syllabus of physics experiments, made several years ago for school use, should remain unre-

vised. There should be changes from time to time, sometimes additions, sometimes omissions; but I urge that these changes should be made in a conservative spirit and with due regard to practicability in classes of considerable size.

I am not prepared to affirm that physics, as now taught in schools which prepare pupils for college, is a very popular study, or that it is as popular as it ought to be; but, when Professor Woodhull, following President G. Stanley Hall and other critics of present conditions, writes: "Twelve years ago 24 per cent. of the students took it voluntarily; now a considerable portion of the 10 per cent. take it only by compulsion," I cannot help wondering whether it is true that twelve years ago all the pupils studying physics "took it voluntarily." It may be true; but, so far as I know, no one who makes the assertion endeavors to prove it.

Incidentally, Professor Woodhull touches on what I believe to be the main reason for the somewhat unsatisfactory character and results of our present school teaching of physics, the inadequate preparation of many teachers for the work which they undertake. This is a condition of things that time will gradually, if not rapidly, improve.

EDWIN H. HALL

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A REPLY

Thru the courtesy of Professor Hall I was permitted to see the above in manuscript, in order that my reply might appear conjointly with it in the *EDUCATIONAL REVIEW*.

I must disclaim any intention of making a "sweeping indictment" or an "intemperate attack." Nor do I understand wherein I am responsible for "academic discussions in a bad sense" which teachers may carry on concerning the specific gravity of a block of wood. Otherwise, I find myself in accord with Professor Hall's suggestions in this paper for improving the work in physics.

If the high schools are sending poor material to the colleges, as we sometimes hear, it follows that the colleges must have sent poor material to the high schools first. Perhaps the

syllabus should be extended to include a prescription of the work college professors may do.

JOHN F. WOODHULL

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BOSTON SCHOOL ADMINISTRATION

The article with the above title in the April number of the *EDUCATIONAL REVIEW* is so admirable, and the history which it gives is so typical of the progress of such reform in a democratic state, that it is to be regretted the lesson was not made stronger by giving at least an outline of earlier efforts for reform leading up to the well-planned campaign which, under the leadership of Mr. Storrow, resulted in a reduction of the number of the school committee from twenty-four to five. To reënforce that illuminating paper, therefore, the writer ventures to present such an outline.

In 1897 the Women's Education Association held a public meeting in Boston, at which Dr. A. S. Draper, then president of the University of Illinois, delivered an important address upon "The crucial test of the public school system." Following that meeting, the same association, together with the Association of Collegiate Alumnæ, the Twentieth Century Club, and the Municipal League, commissioned nine (afterwards increased to twelve) persons to prepare and present to the General Court a bill for the reorganization of the public schools of Boston. Of this committee Dr. Samuel Eliot was chairman until his lamented death, and most of the other members had seen active service upon school boards, or had made a special study of school administration.

This committee, in 1898, 1899, and 1900, brought before the Legislature a progressively modified bill, supporting it each year with verbal arguments from many persons prominent in the affairs of the city and with letters from eminent teachers and school administrators thruout the country. The bill, as each year perfected, was the result of a thoro and progressive study of the problem in the light of what was being done in other cities of the United States, and of what Boston specifically required. The successive forms of it urged upon the General

Court differed, therefore, somewhat in form, tho the underlying principles were steadily adhered to. Those principles, as embodied in the bill of 1900, were, in substance, as follows:

SECTION 1. The inhabitants of the city of Boston . . . shall . . . elect from the inhabitants of the city nine persons, either men or women, to constitute the school committee of said city. . . .

SECTION 2. . . . Said school committee by a two-thirds' vote of all the members thereof shall elect a superintendent of schools, a business director, an auditing clerk, a secretary, and a messenger. . . . The officers elected by the school committee as herein provided shall continue in office until they resign or are removed by a two-thirds' vote of all the members of the school committee.

SECTION 3. The superintendent of schools, the assistant superintendents appointed as hereinafter provided, and thirty masters or teachers, or such larger number as the school committee may from time to time provide, elected from and by the teachers of the public schools of said city, not including temporary teachers, shall constitute the school faculty. The school committee shall adopt rules for the election of the faculty, so that every grade of instruction and every school that does not fall within any such grade shall be represented. The school faculty shall serve without extra compensation, shall consider all educational subjects, including such as are disciplinary and sanitary, and shall make such reports and recommendations to the school committee as the faculty may deem proper.

SECTION 4. The superintendent of schools shall have the general charge and supervision of the teachers and teaching and of the school attendance officers. He shall have the determination of the courses of study and, by and with the advice and consent of a committee of five appointed by him annually from the school faculty, the selection of the text-books and the apparatus to be used in teaching. He shall appoint six assistant superintendents or such larger number, and such number of directors, masters and teachers and school attendance officers as the school committee shall from time to time authorize. He may promote teachers and may dismiss any officer or teacher at his discretion; *provided, however*, that all such appointments, promotions and dismissals shall be reported to the school committee, and shall stand as final unless disapproved by the school committee by a majority vote of all the members thereof within two weeks after the report is made; and *provided, further*, that no teacher or school attendance officer shall be appointed until after examination and certification by the assistant superintendents, acting as a board. The superintendent of schools may be present and speak, but not vote, at all meetings of the school committee and its sub-committees. The school attendance officers may be either men or women, and shall have and exercise the powers and duties now imposed by law, or which may hereafter be imposed by law, upon truant officers or school attendance officers.

SECTION 5. The business director, under the direction of the school committee, shall have the care and maintenance of the school buildings, and cause them to be kept in a clean condition; shall purchase all supplies

required by the school committee, the schools, or the officers and employees elected by the school committee or appointed by any such officer; shall have the appointment, direction and removal of the janitors, engineers and other persons whom he shall require to assist him in performing his duties: *provided, however*, that all such appointments, promotions and dismissals shall be reported to the school committee, and shall stand as final unless disapproved by the school committee by a majority vote of all the members thereof within two weeks after the report is made: and *provided, further*, that the principals of schools be given by the school committee defined rights in the supervision of janitors and engineers. He shall not expend for all such purposes a greater sum than shall have been authorized in gross by the school committee. . . .

Of its first form the EDUCATIONAL REVIEW said, in 1898: "The bill would bring about an absolute revolution. The superintendent of schools would cease to be a dignified figure-head and become an almost unequaled educational power. The management of minute details by the school committee would come to an end, and the modern administrative device of concentrating power and responsibility would be full and frankly adopted. It is inconceivable that so radical a measure will not be strongly opposed; and the sources of the most active opposition may safely be predicted. The enactment of this measure would be an inestimable gain, even if every provision should not work as well as expected."

In the process of urging this needed legislation the committee held a number of public meetings—one being addressed by President Butler of Columbia—carried on an extensive correspondence, and brought every legitimate pressure to bear upon the members of the General Court. That, despite hearty support from a great number of citizens, the successive bills failed of enactment was due of course to many and mixed causes. The most potent factors, however, were the customary apathy of the public toward all educational measures; the rather radical character of the changes proposed; the opposition of certain organizations, the members of which feared a resulting diminution in the influence of women voters; the neutrality of the P. S. A., who maintained it to be their sole function to secure the services of desirable school board members; the hostility of the school committee itself, which, because it at that time contained a clear majority of "reform" members, believed that the needed reorganization could—except in

the point of a diminution in number—be effected within the board itself; and the covert opposition of the professional politicians, who regard school appointments as proper political spoils and the school committee as a legitimate training place for party workers.

Convinced that the opposition of the spoilsmen could not be overcome, except by a popular uprising or by removing from the school committee those powers of the purse which made it then especially attractive to such gentry, the Committee of Twelve decided to drop the plan for a general reorganization until the time—plainly not far off—when the composition and behavior of the school committee, thru political manipulation, should become an offense to decent citizens, and to concentrate all its energies upon taking the control of the large sums annually to be spent upon new buildings and repairs out of the school board's hands. Therefore, in 1901, discarding every feature excepting that—which had been attached as a supplementary act to the bill of 1900—of the creation of a Schoolhouse Commission, the committee was able to push thru the Legislature a bill depriving the school committee of the power of erecting new buildings and of repairing old ones. Under this Act of May, 1901, the Schoolhouse Commission

shall have and exercise all the power and authority conferred, and be subject to all the duties and obligations imposed, by all existing laws, whether special or general, upon the city council or school committee of the city of Boston relating to selecting and requesting the street commissioners to take lands, providing temporary accommodations, and making, altering and approving designs and plans for school purposes; erecting, completing, altering, repairing, furnishing and preparing yards for school buildings, and making contracts and selecting architects for doing said work; and said power and authority shall no longer be exercised by, nor said duties and obligations be imposed upon, said city council or school committee: *provided, however*, that said board of schoolhouse commissioners shall not incur any expense for any purpose . . . beyond the total sums which may be appropriated by the school committee.

SECTION 4. Said board shall not erect or substantially alter any building except in accordance with plans approved by the superintendent of public schools of said city, or provide temporary accommodations for, or furnish, school buildings, or prepare school yards, except as he shall approve; nor shall said board request the street commissioner to take any land except within the limits of a school district which shall first be

designated by the school committee, or take or pay for lands except as approved by the mayor.

While heartily acknowledging the rare qualities of Mr. Storrow for conducting such a campaign as he did, it should not be forgotten that, as the writer has tried to show, there were several antecedent causes for the success of last year's movement for putting Boston in line with modern educational thought and practice. Chief among these were: (1) the fact that the public mind had been well plowed and harrowed by the four years of agitation, in 1898-1901; (2) the fact that the legislation creating a Schoolhouse Commission had shorn a place on the school committee of most of its value in the eyes of the professional politicians; and (3) the fact that the arrogance and reactionary policy of the school board—the control of which had been overwhelmingly regained by the spoilsmen in 1903—had excited keen popular resentment. That the control of the board had been taken away from the reform element was in no small measure the result of the earlier action of the P. S. A. and its elected nominees in actively or tacitly opposing the safeguarding by an act of legislature of those principles of school administration the wisdom and justice of which they had acknowledged by embodying them, in their golden days of power, into admirable rules and by-laws,—which their successors promptly rescinded or annulled.

Moreover, while rejoicing not only that the school committee is now small, but also that its present membership is so satisfactory, it must not be forgotten that the Storrow bill secured little or nothing beyond a reduction in numbers. Therefore, the principle of giving the superintendent and the rest of the teaching force larger freedom and greater power is not yet safeguarded by state law, but rests only upon the easily reversible rules of the present board. Reform cannot be considered as fully accomplished until it is impossible for the good work of the present committee to be nullified by the action of some later committee, the majority of which, thru political or sectarian exertions, may have been made hostile instead of friendly toward the admirable existing plan of administration.

JAMES P. MUNROE

IX

REVIEWS

A college algebra—By HENRY BURCHARD FINE, Professor of Mathematics in Princeton University. Boston: Ginn & Co., 1905. vii+595 p. \$1.50.

A first course in analytical geometry—By CHARLES N. SCHMALL. New York: D. Van Nostrand Company, 1905. vii+318 p. \$1.75 net.

A brief course in the calculus—By WILLIAM CAIN, Professor of Mathematics in the University of North Carolina. New York: D. Van Nostrand Company, 1905. x+280 p. \$1.75 net.

Professor Fine's book is evidently a product of ripe scholarship served by uncommon powers of exposition. Moreover, it was written in the just faith, in which many an author is sadly lacking, that a due regard to the logic of the subject renders it not only more intelligible but also more interesting and stimulating; and it was deliberately thought out and deliberately composed, in the course of several years, with extraordinary patience and conscientiousness. The result is that we have here in the English language a school and college textbook in which algebra is really made to appear in its proper character as a genuinely deductive science, as a rigorously concatenated structure on a solid foundation of explicit assumptions. The work is modern not only in content but, what is more, in spirit; that is to say, the reader is taken into confidence, the secrets and motives of architect and builder are disclosed, and the student, so far from being invited merely to behold a finished edifice, is permitted to witness and to coöperate in the work of construction whether of foundation or of superstructure.

Detailed analysis of the book, even if that were desirable, is here impossible. As to scope, suffice it to say that the treatise falls into two parts which together provide adequately for the algebraic needs both of the school and of the college. The first part (of 70 pages) deals with the number system as such. This system is presented, not in the traditional way as

an inherited kit of tools ready to hand, but as a living thing, a natural growth from simplest beginnings in the needs of human life and thought. Fundamental ideas of Rowan Hamilton, Grassmann, Helmholtz, Dekekind and Georg Cantor, which have usually been reserved for graduate years, are happily rendered accessible to the beginner,—an important and difficult achievement.

In the second part occur several departures from the usual arrangement of topics. These changes, we think, are recommended by didactic as well as by scientific considerations. For example, the early introduction, in connection with simple equations, of the method of undetermined coefficients, and the subsequent occasional use of the method, serve to give familiarity with and deserved prominence to that powerful instrument of analysis. We heartily approve, too, of the emphasis that Professor Fine has placed upon what he calls "the division transformation" and, in connection therewith, upon the remainder theorem and synthetic division. Among other commendable features, we note the prominence accorded to the notion of graph of a function and especially the introduction of that notion prior to the presentation of Sturm's theorem. Indeed so numerous and so conspicuous are the excellences of the book that one hesitates, as not wishing to appear unappreciative or ungrateful, to mention matters in which it might possibly be improved. We venture, however, to believe that both earlier and greater stress might well have been laid on the method of mathematical induction. For one may hold that that form of argument is certainly peculiar to mathematics, without agreeing with Poincaré that every strictly mathematical argument is reducible to that form.

Mr. Schmall's book presents the usual account of the conic sections, contains the traditional chapter on higher plane curves and closes with a brief introduction to the analytical geometry of three dimensions. It is written in a direct and energetic style which, while in general it is clear enough, tends not infrequently to be a little slap-dash or over-hasty, as witness, for example, the "definitions" offered on p. 37. Some of the demonstrations are excellent, as, for example, the proof

of the proposition that every equation of first degree in two variables represents a straight line. On the other hand, the attempted demonstration (p. 298) that "a single equation in three variables represents a surface" can hardly be said to support the author's claim that "all proofs given are rigorous." That claim indeed, in these peering microscopic days, it is extremely hazardous for any one to make. Mr. Schmall's intention to exalt method over matter is praiseworthy, but it ill consists with the exclusive use of the "secant method" in tangent problems. The book contains numerous illuminating exercises, but it is not provided with an index, and the table of contents is meager. We have pleasure in commending the frequent use of abridged notation and determinants. On the other hand, the adoption of "sinister" and "dexter" to denote respectively the left-hand and right-hand members of an equation seems destined to be regarded as unhappy and injudicious.

While some sections are well written, the work is marred by frequent inaccuracies and infelicities of thought and expression. Descartes appears in the form "Des Cartes," p. 1; continuous motion is motion without "hops" (p. 3); functional relationship of two variables is so defined (p. 22) that only one of them is a function of the other; because $a + \infty = \infty$ addition is here said to be "futile," (p. 25); "nought" is used occasionally for zero; on p. 41, we are told that " $f(x, y) = 0$ is called an implicit function"; in the definition (p. 55) of increment, the word "exceed" is employed confusedly; after Δx is described as an "indivisible symbol," it is lawfully employed both as numerator and as denominator, and the like ineptness characterizes the description of the symbol $\frac{dy}{dx}$ (pp. 62, 188); on p. 87 we are told that Δx of the quotient $\frac{\Delta y}{\Delta x}$ "can never reach zero" because the quotient "would then take the form $\frac{0}{0}$ and would be meaningless." The author is of course aware that it is one of the happy offices of the calculus to assign meaning to such forms.

C. J. KEYSER

X

NOTES AND NEWS

**The Influence of
the Report of the
Committee of Ten
on Secondary
School Studies**

In the *School review* of April, 1906, Professor Edwin G. Dexter of the University of Illinois prints an interesting analysis of some facts which bear upon the influence exerted during the past ten years by the recommendations of the Committee of Ten on Secondary School Studies appointed by the National Educational Association in 1892, of which Committee President Eliot of Harvard was chairman. Professor Dexter follows a statistical method of inquiry, and this is always a broken reed to lean upon in judging matters so intangible as influences. Nevertheless, the facts which he assembles and states are in themselves significant. He is certainly right in his opinion, that if conditions as found to exist in 1905 coincide more generally with the recommendations of the Committee of Ten than did the conditions as they existed in 1895, then either the recommendations of the Committee have been acted upon or else their report was an anticipation of the lines of natural and necessary development.

Professor Dexter draws the conclusions that the recommendations of the Committee seem to have carried weight in regard to the teaching of Latin; that in regard to the teaching of English and French and German, the tendency seems to be in opposition to the recommendations of the Committee; that in regard to the teaching of mathematics, some of the Committee's recommendations appear to have had weight, and others not; that in regard to the teaching of physics, chemistry, natural history, history, civil government, and political economy, there is a wide variation in the practice of different schools.

On the whole, Professor Dexter's conclusion is unfavorable

to the influence of the Committee's recommendations upon the secondary school program. On the other hand, he would be justified in going much farther than he does in emphasizing the influence of the Committee's work upon secondary education generally. There can be no question that the recommendations of the Committee were vitalizing in the highest degree to secondary school teachers, both public and private, and even a cursory observation would show that those recommendations have powerfully influenced both the organization of the secondary school program of studies and the methods of presenting the various subjects in the classroom. Much of this influence, and that the most valuable part, would not necessarily be referred to in the published material upon which an inquirer who follows Professor Dexter's method must of course rely.

**The National
Educational As-
sociation**

After soliciting as wide an expression of opinion as possible from the responsible officers of the Association itself and of its various departments, the Executive Committee of the National Educational Association voted unanimously at a meeting held at Chicago on May 5 to abandon hope of holding a meeting in 1906. We have no doubt that the decision of the Committee was wise and that it will be supported by substantially the unanimous sentiment of the Association.

To propose to hold a meeting at San Francisco or in its vicinity was, under all the circumstances, not only quixotic but heartless. Those who were to have been the Association's generous hosts need material help and active sympathy, and they cannot bear any burden of hospitality at this time, however light that burden might be made. On the other hand, the necessary preliminary arrangements for a successful meeting of the Association take a long time to conclude. A local organization must be created and given sufficient time in which to prepare the way for the successful and well-organized gatherings to which the members of the Association have become accustomed under Secretary Shepard's devoted administration of his office.

Within the sixty days remaining before the date fixed for the meeting no proper arrangements could be made, and it is certain that if the meeting had been fixed for some other point than San Francisco, the attendance would have been inconsiderable. President Schaeffer and his colleagues were looking forward with just expectation to a memorable gathering at San Francisco in 1906. Every loyal member of the Association will exert himself to the utmost to make the meeting of 1907 serve for that of 1906 as well as for itself.

It is little less than an epochal debate that **The English Education Bill.** is now taking place in the British Parliament on the Education Bill introduced by Mr. Birrell on behalf of the government. Students of education should by all means take pains to inform themselves concerning the questions at issue in this debate, for they are of far-reaching educational and political significance. When the bill shall have been finally acted upon, the EDUCATIONAL REVIEW will present an analysis of the bill and of the debate upon it by an authoritative hand.

There is small reason to doubt that the bill, substantially as introduced, will pass the House of Commons by a comfortable majority. What its fate will be in the House of Lords, however, remains to be seen. It may be that the long expected controversy over the existence and powers of the House of Lords itself will be precipitated by the pending Education Bill.

Shortly before his death, Mr. Gladstone said to an American teacher that the next great question to divide the English people would be the education question. That prophecy, now nearly ten years old, is rapidly being fulfilled.

EDUCATIONAL REVIEW

SEPTEMBER, 1906

I

THE NEW EDUCATION BILL IN ENGLAND

It has been well said that the judgment passed upon a nation's political struggles by well-informed and thoughtful observers in other lands is like the judgment of posterity. It is more dispassionate, less agitated by the heats of controversy, and, in so far as it grasps the real issues, better able to measure the loss and gain which all great changes entail. American students of education, linked as they are to the United Kingdom by so many ties of kinship and friendly concern, are already well-informed about the educational developments which are going forward in England. But as events have moved quickly during the last few weeks, the Editor has asked me to contribute this paper, in which I will endeavor to give a fair statement of the facts of the present situation and of the conflicting forces which Parliament has to take into account. Without hiding my own belief, I will attempt to deal fairly with the different forms of contending opinion, in order that the reader may arrive at a just judgment upon the question, even tho that judgment may differ widely from my own.

I. *The chief needs in English education*

It should be borne in mind that, so far as education is concerned, the different parts of the United Kingdom are under different laws. Scotland has its own system, Ireland also its

own, and, tho England and Wales have at present a common administration for their elementary schools, their secondary education is for the most part organized on dissimilar lines. Thus, the educational systems of Great Britain and Ireland are marked by considerable diversities, congenial to differences in national temperament and tradition and not unfruitful in varieties of outlook and aptitude. But only the undivided Parliament of the United Kingdom can change the educational laws affecting any of its parts. And from the Imperial Exchequer comes a large and increasing proportion of the funds which are needed for the maintenance of this composite system. What is now in debate is a measure which will directly affect the population resident in England and Wales alone. But the Parliamentary situation in regard to it is governed by the balance of political parties in the United Kingdom as a whole. And the desires of the large Roman Catholic population in certain English cities influence the point of view from which the majority of the Irish members approach the debate.

The last ten years have been a period of ferment in the educational thought of England and of readjustment in the administration of our schools. Of the body of law which governs elementary education in England and Wales, nearly one-third has come into being since 1896. And this legislative activity is the outcome of a deeply-stirred public mind. In Great Britain at all events, Parliaments do not meddle with educational controversy until they are obliged. The newspapers reflect the growing interest in education. Where ten years ago there was a paragraph, there is now a column. Towards convincing open-minded English people that in the past we have greatly undervalued the national benefit of skillfully applied educational discipline, the last decade has done more than any earlier thirty years in our history.

Like all great changes in national feeling, this has come about thru many things working together. One cause has been the leaven of Herbert Spencer's thought, of Matthew Arnold's, and of Ruskin's. Besides this, an altogether new idea of the importance of physical development and well-being as a factor in moral and intellectual training has seized the

mind of the nation. Scientific research, by throwing light upon the significance of environment, has given fresh force to plans of social reform. Men and women are in better hope of "making human life, hampered by a past which it has outgrown, natural and rational." Again, as the gray-headed elders pass away, the older forms of individualist doctrine, preached by such men as Mr. Bottles in *Friendship's garland*, are found to have withered on their stalk, and the younger generation is ready to intrust far-reaching powers to the State. In all recent lawmaking in English education, nothing is more significant than the steady and barely challenged growth of the power of the central authority. Again, the sense of need for greater alertness of mind in industry and commerce has played a part (tho not, I think, so decisive a part as some allege) in disposing the nation to think of education in a more serious way. The vulgar utilitarianism which used to blossom at school prize-givings has lost much of its vogue. People see that, much as education has to do with economic efficiency, it can accomplish little unless from the first it aims at something much higher than money-profit. This liberalizing of thought on educational questions is one of the most hopeful signs in a hopeful outlook. It has brought together many who were once apart, by causing the champions of a humane education to think more than hitherto of the bearings of their favorite studies upon the duties of modern life, and by inducing the Philistine to see some sense in culture. In this and other matters, American and German influence and example, never studied with closer interest or more cordial appreciation than in the last ten years, have not been thrown away upon us, tho no one who realizes the intimate connection between right educational policy and deeply-rooted traditions in national life would think any the better of England if she had set herself merely to imitate methods of organization which have proved successful in other lands.

All these things have been working together for change. But there is yet another force which may prove the most powerful of all. Every one sees that the Labor Party represents a new power in English politics, but it is not less true that it

represents a new force in favor of educational reform. It is one thing for philanthropists to preach education to the people, and quite another thing when the people makes up its mind to get a better education for itself. Yet this is what seems not unlikely to happen. No one can have been present at meetings of the Labor Party without being struck by the keenness of great numbers of those present for improvements in the quality of the education given in the public elementary schools. This body of working-class opinion will have great influence in future. It represents the upthrust of a new social demand. The work of the schools established since Mr. Forster's Act of 1870 has borne fruit in thus producing a desire for educational opportunities different in kind as well as in degree from those which were formerly regarded as sufficient for the masses of the population.

We have thus reached a point of new departure in English educational affairs. It may be convenient if I summarize the chief needs which have now to be met:

(1) The size of the classes in the majority of our large urban elementary schools should be greatly reduced in order that the teacher may be able to pay more regard to the needs of individual children. (2) The intellectual standard of great numbers of the secondary day-schools for boys in the market towns needs to be brought up to the level of the German Real-gymnasien. Many of our local secondary schools for boys flag for lack of funds for the payment of salaries adequate to attract and retain the services of highly educated and efficient assistant masters. It is not unlikely that, for the strengthening of the intellectual work of these schools, the State may have actively to intervene. (3) The new arrangements, pressed forward by the Board of Education, for the liberal education of those intending to become teachers in elementary schools, necessitate great improvements in the staffing and equipment of many of the local secondary schools to which the intending teachers are now to go before receiving professional training for their future duties. An increase in the Government grant to secondary schools has recently been announced, but a much larger subsidy will prove necessary. (4) Additions

to the present training college accommodation are required, and will probably be made by the local authorities with the help of new building grants which the Government has just decided to offer for the purpose. (5) It is desirable to give greater encouragement to practical handwork as a part of the course of instruction in elementary schools in town or country, especially in the case of pupils who expect to earn their living by working with their hands. (6) The physical condition of the children in elementary schools, especially in poorer districts, calls for attention and will be furthered by more fully organized medical inspection, by better teaching of the laws of health and by the provision, where necessary, of suitable school-meals. (7) Higher departments, in which more advanced work can be done, are needed in many elementary schools in small towns and country districts. In the cities much has already been done to meet this need. (8) Central schools, well equipped and fully graded, should be placed at convenient points in many rural neighborhoods, as a supplement to, or substitute for, the small and often ill-staffed village schools. (9) The problem of continuation classes will have to be vigorously handled. At present there is great educational leakage during the years which immediately follow the close of the day-school course. The older forms of apprenticeship are fast dying out, and with them many advantages of systematic practical training in skilled craftsmanship. Joint action on the part of the local education authority and the employers and organized workers in each trade is already leading in many districts to the provision of organized trade teaching for boys who have completed their elementary school course. Opinion is slowly ripening in favor of some more general development of continuation classes on these lines. (10) More systematic encouragement of scientific research at the universities and elsewhere is demanded by an increasing body of opinion in the country, and there are signs that the British Government will, ere long, devote to this purpose much larger funds than seemed necessary or expedient to men brought up in our older administrative tradition.

It will be observed that this series of educational reforms,

for which public opinion in England is ripening, implies two things; first, a conception of national education as a whole from the elementary school to the university; and, secondly, a conviction that public education is but one aspect of a many-sided social problem and therefore should by rights be so organized as to have a close bearing upon the duties of life. Both these points of view have gained in recent years a strong hold upon the national mind. They seem elementary enough when simply stated. But in practice the first has had, till lately, but little influence upon English educational policy, and the second has been too much neglected by those responsible for framing the courses of study in elementary and secondary schools. England has had two separate systems of national education, one for the well-to-do and one for the poor. By the rise of a new and influential class of artisans and thru the growing unification of the people which is resulting from the conditions of modern town life, this dualism in English education is losing its sharpness of outline and is slowly giving way to a desire for greater unity of organization. Moreover, the insistent claims of new forms of professional and industrial need are forcing upon us a reconsideration of the traditional course of study in secondary schools and a new conception, at once more liberal and practical, of the aims of elementary education.

Thus, the older forms of our school system are strained to breaking-point by the upthrust of new social and intellectual forces. Educational arrangements, which seemed adequate a few years ago, are fast becoming intolerable. A new ideal of national education is making the older forms of control and administration obsolete. The political influence of the teachers, especially of those who are in contact with the masses of the people, has greatly increased. The social relationship in which the elementary schoolmaster used to stand to the clergyman is becoming an anachronism. All ranks, including those from which the majority of elementary school teachers are recruited, claim independence from denominational restrictions upon their religious belief. And as, for historical reasons, the older fabric of educational administration was closely con-

nected with the work of religious bodies, it is inevitable that the growth of a wholly new ideal of elementary education should be accompanied by a demand for the cutting of the ties which bound together Church and School.

We feel the need for greater coherency in organization and for clearness of outline in our system of national education. Year by year, the expense of maintaining the schools grows greater as the standard of efficiency rises. It becomes necessary to adopt the most economical methods of administration, and to fix responsibility upon a single local authority, representative of the community and answerable to a Government department, itself armed with strong powers. Hence has arisen the growing dislike for the old division between the elected local authority and the boards of managers who represent the subscribers to the denominational schools; hence has sprung the strong demand for public control over all parts of education: hence the willingness to intrust the Board of Education with a measure of authority which men like John Stuart Mill and Edward Baines would have regarded with grave suspicion, if not with dismay; and hence too the strength of the current of opinion which favors greater uniformity in our school system and which has sapped the foundations of many picturesque survivals of the past.

There is danger in all this, of course. Individual interest is a great force for good in education, and variety of schools makes for variety of outlook in later life. Bureaucracy is a greedy plant, and popularly elected bodies are not particularly sensitive to the finer values of educational effort. In the new movement, much that has served England well will go by the board. Power will be torn from hands which have in the main, tho not always, used it with disinterested regard for what was believed to be the public advantage. But we are in the suck of a strong current which is carrying us forward into a new epoch of national life. The wise thing, as it seems to me, is to work heartily for the future with the new forces of the time; to welcome the manifold benefits which will follow from the changes now swiftly taking place; and to rely upon the need for variety and personal independence in education

being met under the new conditions in ways not less efficacious than those which are now doomed to disappear.

2. *Mr. Balfour's Act and Mr. Birrell's Bill*

Four years ago Mr. Balfour's government put its hand to a great administrative change in English and Welsh education. The ministry had received a new lease of power on issues arising out of the South African war. No plan of sweeping educational reform had played a prominent, still less a decisive, part in the general election. But the need for great improvements in our school system had been borne in upon the nation. Mr. Bryce's commission had reported in 1895 unanimously in favor of intrusting the county and county borough councils with statutory powers for the development of secondary education. Most, tho by no means all, of those practically acquainted with the question had become convinced that the oversight of elementary and secondary education ought to be placed in the hands of one and the same local authority; that the new system should be made to cover the whole country; and that, the currents of opinion in regard to local government being what they were, the only practicable course was to intrust the new educational powers to the county councils (created in 1888), to the county borough councils (*i. e.*, the councils of towns of 50,000 people and upwards), and, with limitations, to the municipal councils of the non-county boroughs. Moreover, in spite of the increase in the parliamentary grant which was paid on equal terms to all types of public elementary schools, the managers of the so-called "voluntary" elementary schools (mostly denominational) had for some years been complaining of the difficulty of meeting by means of subscriptions the growing cost of elementary education. Thus, four streams of opinion converged upon the government. The nation felt uneasy at our educational deficiencies. The experts pressed for the establishment of local authorities armed with powers to improve the elementary and secondary schools. The county councils and the municipal authorities in the large towns were, in the main, prepared to undertake the new responsibilities, and

were definitely opposed to the creation of new local authorities with power to draw upon the rates. The leaders of the Church of England and of the Roman Catholics raised cries of distress at what became known as "the intolerable strain" to which educational development had subjected the voluntary schools.

Not without great hesitation, and with a lively recollection of Sir John Gorst's humiliating failure in 1896, Mr. Balfour's cabinet decided to act. By the power of an overwhelming majority in the House of Commons and hampered by no resistance on the part of the House of Lords, it carried the Education Act of 1902. This measure made the council of every county and of every county borough the local authority for elementary and higher education in its district.¹ For the first time in history, the whole country was brought under the supervision of local education authorities. This involved the disappearance of the school boards, created by Mr. Forster's Act in 1870, for the organization of elementary schools in districts where voluntary effort proved insufficient to meet educational needs, with their *ad hoc* election, independent rating powers, cumulative vote, and membership open on equal terms to men and women. Every council was required by the act to establish an education committee constituted in accordance with a scheme approved by the central authority (*i. e.*, the Board of Education). Every scheme had to provide for the appointment by the council of at least a majority of the education committee and, unless a county council should otherwise determine, this majority had to consist of members who had been elected by the ratepayers of the district to serve on the council itself. Each scheme for the constitution of an education committee was also required to provide (1) for the appointment, by the county or county borough council concerned (on the nomination or recommendation, when it appeared desirable, of other bodies, including associations of voluntary schools), of persons of experience in education and of persons acquainted with the needs of the various kinds of school in the area; (2) for the inclusion of women as well as

¹ London was dealt with separately by a later act, but to all intents and purposes on the lines laid down for the rest of the country.

men among the members of the education committee; (women, it should be explained, are not eligible for election to a county or municipal council, tho they may vote as ratepayers in local elections); and (3) for the appointment, if desirable, of members of school boards existing in the districts at the time of the passing of the act. The county or county borough council, and not its education committee, was given complete control over finance. The municipal councils of boroughs with a population over 10,000, and the councils of what are known as urban districts with a population of over 20,000, were given independent powers in respect of elementary education in their respective districts. But powers affecting higher education were reserved for the county and county borough councils as responsible for larger areas or greater aggregates of population. These are the local education authorities which have been in the saddle since 1902. Tho there is a growing feeling that in some cases the areas for which the county councils are responsible are too large for the best kind of educational administration, and tho many people favor a return [not to the old school board system as it existed before 1902 but] to the system of separate education authorities elected *ad hoc* and open to women on the same terms as men, there is at present no strong opinion in favor of dispossessing the existing authorities. The latter have hardly had time to get their house into order. It is too soon to pass a final judgment upon their fitness for the educational part of their work. Thus, at present the student of our local educational administration finds such a town-studded district as Lancashire or the West Riding of Yorkshire like a slice of plum-cake. The raisins represent the county boroughs, which enjoy complete autonomy in regard both to higher and to elementary education. The currants represent the non-county boroughs and the more populous urban districts, with independent powers of control over their elementary schools. The jagged outline of what remains represents the area under the educational administration of the county council. Convenience, however, leads the greater part of the local authorities concerned to avail themselves in varying degrees of opportunity for

coöperation, which indeed is facilitated, tho not made obligatory, by the terms of the act.

In regard to higher education, which includes secondary and technical education and the training of teachers, each county and county borough authority is required to consider the educational needs of its area and then to take such steps as may seem to it desirable, after consultation with the Board of Education, to meet those needs and "to promote the general coördination of all forms of education" in its district. It is obliged "to have regard to any existing supply of efficient schools or colleges," and the amount which it may spend out of local rates upon the development of higher education is in the case of a county borough unlimited by law, but in the case of a county council restricted to the produce of a rate of two-pence in the pound of rateable value.

In regard to elementary education, each local authority set up by the act is compelled to maintain and keep efficient all necessary public elementary schools within its area. It has complete control over the whole of the secular instruction given in those schools. But the latter were left in the two separate categories which were called respectively board schools (now council schools) and voluntary schools. For the former, the new education authorities are wholly responsible. For each of the latter, however, there is a body of managers upon which the representatives appointed by the local authority are in a minority. The managers of each "voluntary school" are required to provide the school buildings and, save for "fair wear and tear," to keep them in good repair. The managers of these schools appoint and are empowered to dismiss the teachers, but the consent of the local authority is required to each appointment. It is laid down, however, that such consent to an appointment shall only be withheld upon educational grounds, and that the consent of the local authority shall also be required to the dismissal of a teacher unless the dismissal be on grounds connected with the giving of religious instruction in the school. Thus, by Mr. Balfour's Act, all existing "voluntary schools," so far as they were necessary for the educational requirements of the district, were *ipso facto* thrown

for their support upon the local rates for such part of their maintenance as was not covered by the parliamentary grant, save that the cost of the buildings remained a charge upon the supporters of the schools in question.

It is necessary, at this point, to give a few statistics which show the size of each part of this "dual system" of public elementary education in England and Wales. The last published figures (those for 1903-4) report the average number of scholars on the registers of public elementary schools as standing at 6,000,403. Of these, the majority were in "voluntary schools." The totals were—in "council schools," 2,946,511, in "voluntary schools," 3,053,892. The actual attendance of the scholars on the registers is excellent and there is no difference in this matter between the council and the voluntary schools. Both types of school are under the same code of regulations issued by the Board of Education for public elementary schools. Both are inspected by the same corps of inspectors, representing the central authority.

The "voluntary schools," again, fall into five categories—Church of England, Roman Catholic, Wesleyan, Jewish, and "British or other" schools.² Of the total number of 3,053,892 children in voluntary schools in 1903-4, 2,350,176 were in schools connected with the Church of England; 337,868 in Roman Catholic schools; 153,523 in Wesleyan; 11,387 in Jewish; 200,938 in "British and other schools."

The total recorded expenditure on elementary education in England and Wales in 1901-2 (the last year of the old system before Mr. Balfour's Act) was approximately £16,901,276. Of this, more than half (£8,949,650) came from exchequer and parliamentary grants and was, with some exceptions, available for board schools and voluntary schools on equal terms. The amount from school board rates, available in the main for board schools only, was £6,508,297. The amount from voluntary subscriptions (almost wholly subscribed for voluntary schools) was £876,361. The amount from endow-

² The British schools are undenominational. They were established under the auspices of the British and Foreign School Society, which was founded to carry on Lancaster's work.

ments, fees, etc. (mainly for voluntary schools), was £566,968. But the total recorded expenditure, £16,901,276, does not include that on voluntary school buildings, of the amount of which, tho very large, no official figures exist. It does however include school board expenditure on buildings in the form of interest, sinking fund, and repayment of loans.

In 1904-5 things were in a transitional state. The official estimate of expenditure on elementary education is only provisional. It is believed, however, that the total expenditure had risen to about £19,379,653, or two and a half millions sterling more than in 1901-2. Parliamentary grants had increased by nearly a million. Rates had increased by £2,200,000. Voluntary subscriptions for the actual maintenance of the schools had, of course, ceased. Subscriptions for the upkeep of the voluntary school buildings had continued, tho, as before, there is no official return of their amount.

In 1905-6 it is believed by the official authorities that the total expenditure upon elementary education in England and Wales will amount to £20,891,135. Of this, £10,682,935 will be from parliamentary grants, and about £9,909,255 from local rates.

It is undeniable that Mr. Balfour's Act has given a great stimulus to English education. The local authorities have thrown themselves with energy into their work. The educational situation has been surveyed. Men of great business capacity and administrative experience have grappled with school problems which had previously lain outside their sphere. In many parts of the country, public education has for the first time taken its place alongside of the other great departments of local administration. The sums spent upon education have rapidly grown. The less efficient schools have been leveled up to a higher standard of excellence, both in regard to staffing and to buildings.

On the other hand, I cannot disguise my belief that, in the form in which it became law, the act was a mistake. It was too indiscriminating in the help which it compelled local authorities to give to existing voluntary schools. It went too far for its purpose. It wounded the conscience of thousands

of citizens. It inflamed denominational feeling. It challenged reprisals.

Why this was so (and the issue was foreseen when the bill was still under discussion) needs a few words of explanation. A large section of the community maintains that the State, even in its capacity as educator, should take no cognizance of the religious beliefs of any of its citizens.³ Those who hold this conviction are, so far as can be judged, a minority of the English people, but a minority which no government can afford to disregard. They have always looked upon the educational compromise effected by Mr. Forster's Act in 1870 as in itself regrettable, but to be accepted, at any rate, as a provisional settlement, in the national interest. Therefore, they continued, tho at some sacrifice of principle, to pay *taxes*, a large part of which went to the support of schools in which the doctrines of particular churches were taught and in which, by consequence, the teachers had to signify their acceptance of those doctrines. They were led to accept this state of things because in all districts where the earlier educational provision of schools had become insufficient, the compromise allowed the new local authorities (the school boards) to establish schools in which, according to Section 14 of the Education Act of 1870, "no religious catechism or religious formulary which is distinctive of any particular denomination" might be taught. Nor was it made incumbent upon the local authority to provide any religious teaching in its own schools, tho as a matter of fact all but a few did so provide systematic Christian teaching (to which no parent was obliged to send

³ The original position of many English nonconformists was that, as education is necessarily concerned with spiritual matters, the State should leave it wholly to voluntary agencies. This view had to be abandoned when the intellectual destitution of the large towns made it necessary for the State, first, to aid education and then to compel attendance at school. It was then held by many that the secular part of education should be sharply severed from the religious, and the former alone paid for or officially recognized by the State. But the conception of education as a discipline of body, mind, and heart makes this view, in its extreme logical form, untenable. Nor is it possible to contend that the child will necessarily receive religious teaching at home, and that therefore the school may safely be relieved from this part of its training. The failure of many homes to give religious teaching is notorious. In the poor law schools, and in industrial schools religious teaching is paid for, without protest, out of the rates.

his child) within the limits of the above-quoted "Cowper-Temple clause." Every one realized that the religious bodies, and especially the Church of England and the Roman Catholics, had done a great work for elementary education in England, at a time when State action on a large scale was for various reasons unacceptable to the nation. Great numbers of existing schools were thus, by reason of the course which our educational development had taken, denominational in character. The value of these schools was recognized; it was willingly admitted that they were acceptable to the majority of the parents concerned; the reluctance of the greater number of ratepayers to pay more than was absolutely necessary for the elementary education of the poorer classes was a patent fact; and to have struggled against a compromise which took the existing voluntary schools for granted, and which respected their vested right to supply the educational needs of the area they served, would have been, at the time, absurd. But, nevertheless, there was no intention, on the part of the strong nonconformist friends of education, to accept the predominance of the denominationally managed schools in the country districts as a final settlement of our educational problem. Still less was there any acceptance of the principle that, where an existing denominationally managed school was the only school available for the children of the neighborhood, it should continue to enjoy that monopoly for all time. Sooner or later the whole question would have to be reopened and, when that time came, the problem of denominational control would have to be dealt with on new lines. Meanwhile, it was felt that the school board system, with the power of the rates at its back, would grow stronger, especially in the towns.

When, therefore, Mr. Balfour used his great majority to bring about a fresh educational settlement, which (whatever else it did) bade fair to stereotype denominational control of the religious teaching in all existing voluntary schools, and that partly at the cost of the rates, large numbers of nonconformists felt it their duty to resist the working of the new law. The Passive Resistance League was founded in November, 1902. Its members refused to pay that part of the local education rate

which went towards the denominationally managed schools. The weakness of their case lay in the fact that they had not refused to pay *taxes*, part of which had for very many years gone in support of a like object. Nor, so far as I am aware, has there been any recent case of refusal to pay part of the King's taxes on that ground. But the League was vigorous in action and earnest in its utterances. Every one respected the sincerity of its convictions, tho comparatively few were prepared to adopt the more extreme of its arguments. During the three years following the foundation of the Passive Resistance League, summonses for the non-payment of part of the education rate were issued in over 40,000 cases. It became clear that Mr. Balfour's Act had failed to furnish the basis of an enduring settlement.

Nor were the provisions of that act satisfactory to several other sections of the community, apart from the Passive Resisters. The local educational authorities found themselves hampered in their work by the complexity of detail arising out of "the dual system" of schools, and great weight was rightly attached to their complaints, altho it was realized that the difficulties in administration would naturally show themselves in their worst form during the first years of the transition from the old to the new arrangements. Again, a strong body of Anglican opinion regarded Mr. Balfour's Act as unsatisfactory, because it had left in the council schools the operation of the Cowper-Temple clause untouched, and had not authorized facilities for denominational teaching in those schools. Thirdly, the Labor Party pressed with increasing vigor for the removal of the religious difficulty by the secularization of the schools. It is generally admitted, however, that the religious difficulty has been practically non-existent inside the school-walls. It has been conspicuous in the newspapers and on the platform but significantly absent from the schoolroom. And, except in Wales and one or two English districts, the great majority of the people have shown every disposition to favor the smooth and peaceful working of the act. But there was, on all hands, a kindly and tolerant wish to remove anything which wounded the conscience of an earnest minority. And, before the gen-

eral election of last winter, it was obvious that Mr. Balfour's Act would soon be amended in the interests of national unity and of the smooth working of local government.

The general election was decisive in favor of such a change. One of the first tasks of Sir H. Campbell-Bannerman's ministry was to frame a new education bill for England and Wales. And the result of their deliberations was the measure introduced in the House of Commons just before the Easter recess by Mr. Augustine Birrell, the President of the Board of Education. The bill proposes to sweep away the dual system of elementary schools. After January 1, 1908, no elementary school is to receive any aid from rates or taxes unless it is provided by a local education authority. The local authorities are retained in the form set up by Mr. Balfour's Act of 1902. All voluntary schools are to be transferred within a given time to a local authority (if the latter is prepared to take them over), unless their managers or owners decide either to close them (which they may not do if the buildings and endowments form an educational trust) or to maintain them as "certified efficient schools" under Government inspection but without aid from public funds. Elaborate arrangements are proposed for the transfer of the existing voluntary schools, which number over 14,000. According to the bill, as read a second time, the transferred voluntary schools will fall into two categories, viz., those in which ordinary facilities for special religious instruction will be given and those in which extended facilities will be granted. First, with regard to the latter the bill makes the following proposals: In urban areas with a population of over 5000, a local authority will be permitted, if it so wishes, to allow denominational teaching to be given, by the regular teachers on the staff, in any transferred voluntary school, provided (a) that the authority is satisfied after holding a public inquiry that the parents of at least four-fifths of the children attending the school desire such facilities, and (b) that there is other public school accommodation unaffected by such a permission, for the children attending the school whose parents do not desire special facilities of the kind named. The denominational instruction thus given is not to be at the expense

of the local authority. This permission for "extended facilities" may be withdrawn after subsequent inquiry, and again accorded, should the local authority subsequently see fit to change its mind in view of altered local circumstances. This is the famous Clause 4. It has provoked a storm of controversy. It is evidently intended to meet the case of Roman Catholic, Jewish, Anglican, and other denominational schools in urban districts. But the Roman Catholics regard it as giving insufficient guarantee for the maintenance of Catholic schools under Catholic teachers in districts where the local authority is adverse to Catholic claims. Many nonconformists resent it because, to all intents and purposes, its adoption would involve the maintenance of denominational schools out of the rates. Others object to it on the ground that the clause would lead to municipal elections being fought in many places on religious issues. The clause seems to me wholly creditable to the good intentions of the Government but logically at variance with what they have chosen to regard as the central principle of their plan, viz., the complete subordination of all public elementary schools to the local authority. Denominational control of a school implies the right of the denomination to choose its own teachers. The Government has attempted to provide for the continuance of denominational schools where the parents express a decided preference for them (a wise decision in the present circumstances of English life and one that will tend to the smooth working of our local government), and at the same time to place in the hands of the local authority complete control over the selection and appointment of the teachers in such schools. The second half of this policy is incompatible with the first. If a local authority is to work the clause, it will be bound to have regard to the religious beliefs of the teachers it appoints for service in this category of its schools. At the time of writing, Clause 4 still stands part of the bill. But it has not yet passed committee. Not improbably the measure will undergo reconstruction, and Clause 4 be altered or dropped. Secondly, with regard to the other category of transferred voluntary schools, the local authority is permitted to make arrangements with the trustees or owners of the

schools to allow denominational teaching to be given, on not more than two mornings in the week, but not by the regular teachers on the staff and not at the expense of the rates. This is Clause 3 of the bill. It will apply to multitudes of village schools, the vast majority of them connected with the Church of England. The idea is that the clergyman or minister should come in and give the denominational teaching twice a week. The ordinary religious teaching would, if the local authority arranged for it at all, be within the limits of the Cowper-Temple clause and be given by the regular teachers on the staff, unless they objected to doing so on conscientious grounds. This clause wrests, in effect, the control of the village elementary schools from the Church of England. It is the retort to Mr. Balfour's Act. Many Church people strongly resent this proposal as certain to disturb an old social order to which they are attached, and which they can justly claim to have worked for the public good in hundreds of cases. On the other hand, the system has been guilty in some places of harsh social injustice to humble nonconformists and is too much associated with an old-fashioned ideal of the true functions of a public elementary school. "Old, unhappy, far-off things" are in the memories of many who press for the change. The spirit of the time is in favor of it. The old form of social control is becoming incompatible with the democratic freedom of modern life. The teachers have risen to a position in which they resent a form of subordination to the clergyman which, tho happy enough in many cases, is at times irksome and irritating. For my own part, I think that Church people will do wisely to work cordially with the new forces of the time; to accept the new conditions with a good grace and with confidence that opportunities for wise and tactful influence will never be wanting; and to make a strong effort to put the proposed system of bi-weekly denominational teaching to effective use.

But there is need in England for a number of schools—a minority of the whole—in which the convictions of a great religious body can express themselves freely thruout the influences and observances of school-life. It is not impossible that such schools may still be recognized as supplementary

to the system of public elementary education under local control and as eligible for a share in parliamentary grants tho not for assistance from local rates. For this, however, the bill in its present form makes no provision. But the repeal of a single section in the Elementary Education Act of 1870 would enable the Government thus to meet the strongest part of the denominational claim.

There are other important features in the Government Bill, of which a shorter description must suffice. Great numbers of the existing voluntary schools are held on legal trusts. The situation is further complicated by the fact that between 1833 and 1881 the State made building grants amounting to £1,766,854 in aid of 6785 voluntary schools. Of this total, £1,515,205 went to schools connected with the Church of England. Thus, the nation has an equitable claim in respect to part, possibly a twentieth part, of the fabric of many of the voluntary schools. The Government Bill proposes the appointment of a commission of three persons with power to determine the difficult legal questions thus connected with voluntary school buildings held on trust. But much opposition has been roused by a section which declares that no court shall have power to review or interfere in any way with the schemes, decisions, or other proceedings of these commissioners. It is possible that the Government may think it well to grant a right of appeal to some superior tribunal.

Part II of the bill proposes a complete revision of the existing law in regard to all educational endowments. This part of the bill would greatly increase the administrative powers of the Board of Education—a tendency conspicuous thruout the measure. Another stringent clause aims at protecting all teachers from religious tests and is defended on the ground that, to all intents and purposes, teachers in schools under public authority should be regarded as members of the civil service. This again is a sign of the tendency to increase state control over the teaching profession. The bill proposes, in another part, to establish, under the significant title of “the Council for Wales,” a separate central education authority for the Principality. The Council for Wales is to consist of members

appointed by the Welsh county councils, county borough councils, and municipal borough or urban district councils representing areas with a population of over 25,000. It will have power to supply and aid the supply of education of all kinds in Wales. To it will be transferred, subject to certain rights of reservation, the powers and duties of the Board of Education, of the Board of Agriculture (with regard to instruction connected with agriculture and forestry), and of the Central Welsh Board for Intermediate Education. Thus this part of the bill proposes to establish educational home rule for Wales.

The two-penny limit of the rate for higher education in county areas is removed by the bill. Local education authorities are given powers for the compulsory purchase of land for purposes of higher education, as already for elementary. And, to relieve the pressure on the rates, the Government proposes an additional parliamentary grant of £1,000,000 a year and to extend the period for the repayment of money borrowed by local authorities for educational purposes, to a period not exceeding sixty years.

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Postscript

The above was written in May. The Educational Bill, lightened by the omission of Part II, which dealt with educational endowments, passed thru the House of Commons in the last days of July.

Two changes of great importance have been made in it. The first is the recognition of a category of state-aided elementary schools which are to receive Government grants but to stand outside the local system or to receive no subsidy from rates. The hope expressed in the earlier part of this article that the Government would adopt this method of dealing with the one insoluble part of their difficulty has thus happily been realized. It is true that the conditions imposed by the amended Clause 4 will narrowly limit the number of schools which will in any case be eligible for admission to the new category of

state-aided schools. That is as it should be. No one wishes to see the new category a large one. But I suspect that in the course of time the principle that in certain circumstances the State may aid a school which stands outside the local organization will be extended and found beneficial both in elementary and in secondary education. The House of Commons unanimously accepted a further amendment which enables the Board of Education to give direct aid out of the parliamentary grant to schools for demonstration and practice connected with training colleges under Government inspection. It was clearly felt that the experimental work of such schools must be given the guarantee of direct Government supervision and aid and not be exposed to the danger of being hampered by mistaken economies on the part of a local body.

The second amendment of great importance requires the council of any county, with a population of more than 65,000, to prepare a scheme for the delegation of some of its powers and duties with respect to elementary education to representative bodies within its area. A special exception, however, is made in the case of London, which, tho a county, is excluded from the operation of the clause. The amendment is an attempt to meet a widespread feeling that in large counties the working of the Act of 1902 has been overcentralized and has fallen too much into the hands of paid officials. It is desired, therefore, to give larger opportunity to local interest to show itself in educational management. But as the new clause expressly forbids the county authority to delegate any power of making a by-law for school attendance, or of incurring expenses in respect of rent or capital expenditure on the provision or improvement of elementary schools, or any power or duty in connection with the engagement, dismissal, and salaries of teachers, the responsibilities which will be actually handed over to the minor bodies within the county will not be of great importance. The new clause will, however, enable a progressive district in a sluggish county to supplement the normal county expenditure on elementary education and thus to secure for itself better teachers and an improved course of study. In respect of the course of study in their schools the

minor authorities will certainly have opportunities of influence, and where they are strenuous and intelligent their views will doubtless carry weight with the county committee.

The Government have decided to appoint as parliamentary representative of the council of Wales a special minister with a special staff. There will thus in future be a Welsh office as there are already a Scotch office and an Irish office. The new Welsh council will begin with educational work, but is clearly intended to be intrusted with other responsibilities as time goes on.

The next stage will be reached when the bill comes up for consideration by the House of Lords. Very important changes may yet be made in the measure as a result of conference between the two houses.

M. E. S.

July 23, 1906

II

SOME PRESENT COLLEGIATE TENDENCIES¹

On occasions like the present, prefatory remarks are, as a rule, best dispensed with. The more directly the matter for discourse is reached, the better for all concerned. It so chances, however, that for me personally this particular occasion is exceptional. In the first place, this is my fiftieth year since graduation; and, as no similar anniversary has preceded it, none like it will follow. The classes of 1856 now gather each to its Alma Mater, and from the scant and furrowed remnants the cry goes up—*Morituri te salutant*. But, in the second place, I individually have another message to deliver,—a species of valedictory. I claim, therefore, the privilege of a preliminary word, at once explanatory and justificative.

Not what is known as an educationalist, I propose today to discuss grave educational problems. The views I am about to advance are moreover somewhat at variance with those at this time usually accepted; and, tho radical in their way, are in some respects reactionary. So, knowing by experience how thoroly equipped those are with whom I must necessarily be brought in conflict, I want the why and the wherefore of what I say to be clearly premised.

The late Sir Leslie Stephen once, when reading a paper on some ethical topic, observed at the threshold: "I wish to suggest certain considerations which may, perhaps, be worth taking into account; and, as I must speak briefly, I must not attempt to supply all the necessary qualifications. I can only attempt to indicate what seems to me to be the correct point of view, and apologize if I appear to speak too dogmatically, simply because I cannot waste time by expressions of diffidence,

¹ An address delivered before the Phi Beta Kappa Society of Columbia University, June 12, 1906.

by reference to probable criticisms, or even by a full statement of my own reasons." So, in the present case, with no disposition to dogmatize I even entertain grave doubts whether many of the propositions I am about to advance are altogether tenable; none the less, I shall advance them as clearly and positively as I can for what they are worth, leaving others to supply words of hesitancy. I also crave a moment's patience while I briefly set forth the reason why, a confessed layman, I am here at all.

In doing this I fear I must make a too frequent use of what in the dictionaries is defined as the nominative case of the pronoun of the first person; for, as the views about to be advanced are largely based on personal experience, it is not easy to see how so doing could be avoided. At best, the effort to avoid it would necessarily involve such clumsy as well as frequent circumlocutions that acceptance at the outset of the charge of egoism is manifestly the lesser evil.

Close upon a quarter of a century ago, that is, in June, 1882, I was chosen by the alumni of Harvard a member of its Board of Overseers. The term of service on that Board is six years, and I have since been three times in like manner honored. The close of my fourth term is near; and, with its close, my official connection with the University ceases. My personal interest in it will, of course, continue. Looking back on those twenty-four years of service as continuous as the law allows, certain conclusions have, I find, gradually crystallized in my mind; and I am not unwilling to avail myself of this opportunity to set them forth. Wholly the result of personal experience, and of observation from a somewhat external point of view, they can at most be merely an individual's contribution to an endless, but always interesting, debate. As such they are offered.

Looking back then over the two periods, the half century since graduation, and the four-and-twenty years since I first took my seat as a Harvard Overseer, I find myself, as is not unusually the case, by no means in complete accord with results:—nay, more, as already intimated, I find myself somewhat of a reactionist. In no degree an admirer of things that were, I am, if possible, still less disposed to rest in all respects con-

tent with what is. My testimony is merely that of an observer,—an observer who is neither an optimist nor a pessimist, tho, perhaps, inclined to be otherwise-minded.

I am about to speak, be it also remembered, not of the University but of the College,—the period not of professional but of academic training, the four years which, half a century since, intervened between the seventeen and twenty-one of life, and which now intervene between eighteen and twenty-two. As respects this period,—the more essentially formative period of life,—the two noticeable college changes which have come about within the half century have been the great increase in the number of students as well as of institutions, and, so far as Harvard is concerned, the adoption and consistent following-out of the elective system in studies. In the beneficial results of both I was once a believer; but as time has gone on and I have observed the younger generation, more and more doubt has arisen in my mind, until now I have become satisfied that as respects numbers a thoro reorganization of the whole college system is necessary, while, as respects the elective system, I am equally clear a reaction is both impending and desirable.

First, as to numbers and the college organization. The Harvard class of which I was a member appears in the quinquennial catalog with ninety-two names, the largest number recorded up to that time. The college then reported 320 students in all. Today, fifty years later, the graduating class numbers 242, and the academic department of the University,—Harvard College proper,—last year reported more than 2000 students. It is matter of common knowledge that, in this respect, the experience of Harvard has been in no way peculiar. Brown, Amherst, Williams, Tufts, and Dartmouth each number from 379 to 900 undergraduates, all exceeding in size the Harvard of 1856,—Williams by forty per cent.; Tufts by eighteen per cent. The criticism I have to offer, in so far as it is either just or erroneous, is therefore applicable to all our colleges. Whether or no this great increase both in students and in institutions is desirable, I do not propose to inquire. Very possibly it is not. It may well be merely an-

other form of waste of force, many boys going, or being sent, to college, who are in no way fitted to derive advantage therefrom. The attempted conversion of sows' ears into silk-purses is proverbially an unfruitful industry; in the present case, it is also, I have sometimes thought, open to grave criticism as a practical misapplication of an endowment. Conceivably even institutions of the more advanced education may have an eye to bigness of competitive output; and, if such a view, however loudly disavowed, prevails, quantity will surely take precedence of quality. The temptation undeniably exists. Passing this by, however, and coming directly to my point, all subsequent observation tells me that the Harvard college system of fifty years ago—the distinctly American collegiate system—was already in my time outgrown, and in essentials radically defective. Further, I find myself led to believe that the condition of affairs, in this respect bad then, has since grown steadily worse. The whole situation I am persuaded today stands in crying need of reform; and yet how to reform it is, I confess, a problem most difficult of solution. Let me state the case.

At Harvard, as elsewhere in the American colleges, we still adhere to the old organization,—the four classes, from Freshman to Senior. But, fifty years ago, each of the four classes was a unit. Following the secondary school system, a class was divided into divisions which, during the first two years of the course, recited, or attended lectures, together; and, subsequently, during the two last years,—the Junior and Senior years,—when the choice of electives was to a certain extent permitted, the divisions in electives were limited to the class, the members of which thus entered college, went thru it, and graduated together. Naturally, a class feeling, more or less strong, resulted. In those days each classmate knew every classmate, and could address him by name. As late as 1870, and the advent of Dr. Eliot to the presidency, the traditional organization was not wholly outgrown, altho a maximum of development had for some time been reached. The college had become unwieldy. Before 1850 even the contact between the instructor and the individual student was less than it had

formerly been,—far less than it should be. Still, up to about 1870, every instructor had a more or less definite opinion of every student who recited to him; and every student had a clearly defined judgment as to every instructor. The personal relation between instructor and student was, however, even then only theoretical. The influence of contact was conspicuously lacking. For purpose of illustration let me appeal to my own experience.

In college days I was about an average student. Standing high in only one or two courses, I was an omnivorous reader; and, as I now clearly see, stood greatly in need of friendly counsel and sympathetic guidance. Of it I got absolutely none. Once only during my entire college life do I remember coming in contact, except incidentally and in the most conventional way, with an instructor. The result did not tend to edification. It was early in my Junior year. My record up to that time was neither good nor bad. I had to a large extent idled away my time, giving no great attention to my studies, and indulging freely in what would now, I suppose, be termed my elective aptitudes,—in other words, followed the lines of least resistance. As the result of a certain approach to sober reflection I at last determined to take advice, and, perhaps, do better,—in other words, becoming more or less what was known as “a dig;” I thought to go in for rank. With this highly commendable end in view I had recourse to a prominent college official. An elderly man and a remote connection of mine, he was famed for shrewdness and practical good sense. Knowing my family well, he knew me a little. Very clearly do I recall that interview,—the room, the face, the words that passed. I came for counsel; my reception was kindly. I put the case, and asked for advice. I proposed to be more studious than I had been; what suggestion had the guide, philosopher, and friend to offer? “Well, Adams,” came forth the slow response in friendly tone, “you are just about the middle of the class, and you stand quite high in one department; placed as you are, I wouldn’t bother much about rank in a general way. If you retain your position in that course, it will put you at graduation in the first half of the class; and that’s all you

want!" That single word of counsel from that quarter proved in my case conclusive. All further thought of application was dismissed; and, thereafter, I abandoned myself implicitly to the lines of least resistance.

The experience was, I believe, typical. So far as influence on the individual, as between instructor and student,—master and disciple in theory,—so far, I say, as this great factor in all higher education was concerned, our college system was outgrown and wrong then, I know; my observation tells me it has in this respect been going steadily from bad to worse ever since. What was the system then? What is it now? The college, or academic period,—the years between seventeen and twenty-one, in 1850, as between eighteen and twenty-two, in 1900,—this period between school and profession is distinctly formative; during it the average human nature is in its most plastic state, and peculiarly subject to influence, good or bad. Under our American college system, what is done for our youth during that period? Fifty years ago the boy was taken from school at seventeen, and sent to Harvard. Up to that time of great change he had lived at home, subject to what is known as home influence, certainly to home supervision, and he had attended school. The discipline was constant and rigid; the instructor knew every boy in the class; every boy was, so to speak, "sized," and his place assigned to him both in the estimation of others and in his own. He was then suddenly projected into a new life; and, thereafter, left absolutely to form himself. All external, individual direction was removed. The impress of the elder and riper mind upon the younger and less mature was absent. Not even an effort was made to supply the want. The idea of such a want on one side, or function on the other, found no place.

For purpose of contrast, let me cite a case. A number of years ago I had occasion to prepare a memoir of the younger Richard Henry Dana, the author of *Two years before the mast*. A noticeable man in almost every way, in some respects Mr. Dana was gifted with genius. In the course of his student life at Harvard he had, quite unconsciously, occasion to illustrate by his experience the deficiency of system just referred

to. It was in 1831, when the classes at Harvard, averaging some sixty in number, had not yet swollen to the point that did away with individuality. Entering college at the age of sixteen, as the result of one of those extremely ridiculous rebellions which distinguished the Quincy presidency, young Dana had the great good fortune to be rusticated for a term. Of an impressionable nature, he passed his months of enforced absence from Cambridge at Andover studying with the Rev. Leonard Woods, subsequently President of Bowdoin College. Thereafter Mr. Dana always accounted that silly college rebellion, and the rustication consequent thereon,—the being sent away from Cambridge in disgrace,—as one of the fortunate incidents of life, bringing him as it did for months at a most receptive age in close moral and intellectual contact with a really superior man. President Woods was then but four-and-twenty years of age, and a resident licentiate of the Andover Theological Seminary. Long afterwards, Dana wrote of his preceptor that he was an “indefatigable and enthusiastic student, with a heart full of noble and kind sentiments, with a manner which won the confidence and love of all, with remarkable purity of spirit, free from prejudice, opinionativeness, and exclusiveness.” Here was a truly suggestive experience, conspicuously absent from Harvard possibilities whether of that period or of this.

Conditions in this respect have, as I have said, not improved with time,—they have, on the contrary, grown distinctly worse. The gulf which divides the usual instructor from the average student is far more impassable now than it was in 1850,—far less impress of individual mind on mind is possible. I bear witness it was little enough then; but, now, what room is there for it at all? The class is broken up, and the course substituted for it. The lecture has taken the place of the recitation. Except in certain limited courses and with individual students, the periodical examination paper is the nearest approach to personal contact. The average student is merely one unit in an impersonal mass. Of the elective system I propose to speak presently; in this connection it is merely necessary to say that, as now in use, it plays into the general

scheme, rounding out its imperfections. It supplements its deficiencies. What is the result?

Take the average boy of today,—my son or yours,—consider the college course open to him. He is now apt to go to Cambridge or New Haven not from home influences, but from the preparatory school. So far, my observation leads me to believe the change of system has been beneficial. The streets of our modern cities are not edifying as the place for resort of boys during the play hours, and home supervision has not tended to become more rigid or even wiser as the years have passed. The equalizing influence of the preparatory school is good; and it is good just to the degree in which supervision is constant, and discipline wise in strictness. The contact between master and pupil is homelike and personal; the immature and the more mature rub against each other. The attrition is unavoidable; its effect unconscious.

And the boy suddenly goes to college! What greater change can be imagined? From an existence subject to unceasing supervision he passes to one of extreme freedom; from daily contact with the more mature he becomes a lecture-room unit; from a system of studies carefully prescribed, he is invited to take his choice from a bewildering assortment of electives; in place of an intelligent guidance he is thrown roughly back on his own untutored judgment. Such a system I hold to be radically wrong. An outgrowth of something suitable enough for an earlier and a simpler period, it is in no way adapted to modern conditions. Released from the preparatory school the boy is turned out, and left, so to speak, to browse around at his own sweet will; and this too at a period when his judgment is most immature, when he least understands himself or knows the world, when all the hard lessons of life are yet to be learned.

Nor, according to my observation, does the small institution,—the backwoods academy and the fresh-water college,—offer a desirable alternative. Distinctly it does not solve the problem; quite the reverse, it complicates it. If the young man is to live in the city, is it quite wise to bring him up in the country's sweet seclusion? Moreover, the small college of

today is larger than the Harvard of fifty years ago, and the same outgrown system is there in vogue. The possibilities of instruction are not so great; the educational contact of man on man among equals is less; and the great traditions and associations, so immensely valuable and appreciated in later life, are, comparatively speaking, absent. I may criticise the Harvard college of fifty years ago; I may point out its present shortcomings; but, none the less, a very solid satisfaction exists for me in the consciousness that I am a Harvard man. There is a good deal in the tower-stamp. I dare say in Great Britain there are very excellent educational institutions at Manchester or at Paisley; none the less I should much prefer being an Oxonian or a Cantab. So with us.

I have set forth what was, and suggested what is. In place of either, the ideal college organization is not difficult to outline; but, besides a decided lack of faith in ideals, I recognize fully the practical obstacles in the way of attaining their fulfillment. In the case of Harvard, none the less, I would, were it in my power, discontinue absolutely, and wholly break up, the traditional academic system. Harvard College, save in name and continuity, should cease to exist. In place of it I would have a number of colleges, all independent, at the head of each of which should be a Master,—if you like, a President. Those colleges should be so limited in size that individuality would be not only possible but a necessary part of the system. The Master should know every student. Instructors and students should constitute a large household under several roofs and with common grounds,—independence and individuality under suitable restrictions should be the underlying motive. The University with its elaborate machinery of instruction would then come into play to supplement college instruction. The University professors would teach; and the students of each college, under the supervision and by the advice of the Master of the college, would select their courses. The system of general University electives would be combined with prescribed home courses in each individual college. The Master would give tone and character to his college, and to each individual student in it. The final degree, bearing the name

and seal of Harvard, would be conferred as the result of examinations in common, all the colleges competing.

Such is my ideal of a system to replace the present and traditional system, and make good its glaring deficiencies. The obstacles in the way of its realization, however, loom large. Harvard is a growth,—a growth of close upon three centuries. Its halls, its grounds, its location, its endowments, its organization, and, more and most of all, its traditions, are obstacles well-nigh insurmountable. The additional cost also of such a system as that outlined, tho it would vary according to colleges, would, at lowest, be comparatively large. Each college would, it is true, establish its own tuition fee, as secondary schools now do, and thereby a great present defect would be removed; for Harvard now has one fee for all,—rich or poor,—a most inequitable equality. Under an independent college system, at once elastic and individual, but culminating in a common uniform result, anything and everything might be anticipated—the endowed and free college, the college with scholarships, the college of moderate cost, or finally, the college of millionaires. All, however, would be subject to the supervision of the Board of Overseers, acting as the Grand Inquest of the University, and all would be judged by the common test, the conferring of the University degree.

I have referred to the course of studies to be pursued in the ideal college,—the prescribed courses and the electives. All would be under the immediate advice and impulse of the Master, necessarily of more mature judgment, acting on personal knowledge of the individual student,—his aptitudes, his deficiencies, and his environment; and this naturally brings me to the remaining and much the more important part of my theme. I refer to the elective system, so-called, in its present stage of development and application, so far at least as Harvard is concerned. And here I may as well at once blurt out a confession of faith. Briefly, speaking from personal experience of what I know, and from observation both long and patient, I have come to regard the elective system in its present form of development as an educational fad, and a very mischievous one. As such, I do not believe in it; nor have I any faith in

its outcome until, as an educational process, it has been reconsidered and placed on a new basis, radically different from that now in use. I am quite well aware such a conclusion as that just expressed is at present hardly conceivable among educators, at least those in my immediate environment. It is in their eyes much as if doubt were expressed of the Copernican system, or the multiplication table were challenged; all the same, I doubt, and I challenge. I am here also to set forth the reason for the faith, or lack of faith, that is in me.

Let me, in the first place, clearly define my position; for, tho misrepresentation is of course, I do not want to be misunderstood unless intentionally. I have said that I am a disbeliever in the elective system, so-called, as at present developed and applied; and I may add I am no more a believer in it as developed and applied fifty years ago. In the fundamental idea of an elective system, that of individuality and the cultivation of aptitudes, I have firm faith; but that idea finds poor expression thru the system now in use, an expression in my judgment crude, ill-considered, thoroly unscientific, and extremely mischievous. And now, speaking again from experience and observation, in what I have to say I must make even more frequent use than heretofore of the personal pronoun.

My understanding of the argument in favor of the elective system, both in its earlier form of fifty years back and its more fully developed phase at present, is that, recognizing individuality, it gives scope and play to aptitude. The field of human knowledge has also been of recent years vastly extended, and its products so diversified and again differentiated, that a smaller and yet smaller portion only can be covered even by the most ambitious intellect, and, hence, selection is necessary. So, fifty years ago and in yet greater degree now, the youth of eighteen was let loose in this vast and diversified pasture ground, and told to make his selection, consulting his aptitudes. The system thus presupposes that the average youth of eighteen, fresh from school, has defined aptitudes, and not only understands himself, but can be depended on to select judiciously. I may have thought so once; but I was

very young. I am older now, and I make bold, as the result both of experience, and somewhat bitter experience, and of observation, and somewhat extended observation, to challenge both premises and conclusion.

In the first place, I wholly deny that the average youth of eighteen has any well-defined or clearly developed aptitudes; or, having them, that he is at that age well qualified, or, indeed, in any sufficient degree qualified, to judge of them, or of the training most calculated to their more perfect development. I distinctly and most definitely know, and now sadly recognize the fact, that it was not so in my case; it was not so in the case of any of my brothers or of my sons; it has not been so in the case of any single person who has chanced to come within my range of close observation. That I, and that every one of those I have thus referred to, had a certain degree of individuality, and could do some things far more readily than I, or they, could do other things, goes without saying; but that the average youth of eighteen has distinctly defined aptitudes, or any clear apprehension of how his faculties as a whole should be brought into play and trained to the proper development of those aptitudes, I know positively to have been the reverse of correct in my own case, and I have, moreover, never known a case in which it was correct. That the elective idea was an improvement, and a great advance on the educational Procrustes-bed system which preceded it, I do not for a moment deny. On the contrary, I fully and undeservedly concede it. But in itself, as yet developed, and as a final result, I find myself compelled to repeat I regard it as crude, ill-considered, thoroly unscientific, and extremely mischievous. It recognizes only liberty; and liberty, tho much, is not all. Like most other things liberty is liable to abuse as well as misapplication; and anything, sunlight even, taken in excess is poison. But on this head I believe Madame Roland made long ago a pregnant and familiar observation at a, for her, highly emotional moment.

Recurring to the general problem:—the old Procrustean system of college education was based on the assumption that certain things went to make up what was, and for that matter still is, conventionally known as a man of liberal education.

All men, moreover, were assumed to be alike. What experience had shown was good for most was good for all and for each. The educated man, so-called, must know certain things, or at least have a smattering knowledge thereof. They were always the same things. The only conception of a mental training was confined to a thoro grounding in what were known as the "Humanities." This system was traditional; and accepted as final in University circles until a time almost within the memory of men now living. It was first broken into at Harvard during the presidency of Josiah Quincy, and his remark when a chair of physics was then suggested has become a Harvard classic. "Throw physic to the dogs," the old President exclaimed. Whether thru accent and intonation in this case the word "dogs" was intended to designate the student body, or whether in a general way Mr. Quincy merely relieved himself of an apt Shakspearean quotation, does not appear. Nevertheless, the system was, and by tradition had always been, one of strictly prescribed studies, uniform in character and application. Once released, and in motion, the pendulum swung far back. In fact, it swung to the other extreme. The cry was Liberty, Aptitude, Individualism.

Originally, and distinctly so in my time, the conception of a university, or liberal education was that the baccalaureate had at least a rudimentary insight into a great many branches of useful knowledge,—for example, the classic tongues, history, physics, metaphysics, philosophy, mathematics,—including arithmetic, algebra, and geometry,—logic, astronomy, political economy, the use of the spheres, etc., etc., etc. These studies were not much regarded from the mental gymnastic, or training, point of view; but, like silver dollars in the pocket, they were good things to have in the head and memory. A little knowledge of chemistry or algebra might come in handily some day; almost as much so as an apt classical quotation. More recently this mid-century practice has given way to the specialist theory now in vogue.

I find myself as much dissatisfied with the new as I was with the old. Neither squares at all with my experience or my observation. What have I to propose as a substitute for that

which exists, and which I thus unsparingly condemn? Something, I unquestionably have; like Touchstone's Audrey, perhaps, "a poor virgin, sir, an ill-favored thing, sir, but mine own: a poor humor of mine, sir, to take that no man else will." But, before propounding a system it is necessary to agree on first principles. To begin with, it is essential to define a college education,—that is, an education which prepares for life's specialty or calling. It is, I contend, purely a training of the mental powers,—the suppling and development of the intellectual muscles and sinews,—the proportioning of the faculties. So far, I imagine, there will be a general concurrence; no paradox has yet been enunciated. But both my observation of others and my self-experience next tell me that all the faculties, as seen in every human mind I have had occasion to study, group themselves under three distinct heads, first, and highest, the imaginative; second, the reasoning; and, third, the observing. There is no attribute of mind, so far as I know, which will not find its proper place in one or another of these groups, and be subject to its laws. The imaginative includes, of course, the literary and the artistic; the reasoning, logic, mathematics, and cause and effect; the observing, all outward manifestations of matter and inward of mind, the subjective as well as the objective. Every man's aptitudes lie in one or other, or possibly all three of these directions; if in all three, he is apt to be afflicted with what is commonly known as a fatal facility. If exclusively in one, he has a manifest call,—he is then known as a poet, astronomer, naturalist,—Shakespeare, of imagination all compact; Newton, who, as Lord Erskine tells us, "carried the line and rule to the uttermost barriers of creation, and explained the principle by which all created matter exists and is held together"; Darwin, who, thru observation, re-wrote Genesis.

The educated man—what we colloquially call the all-round educated man—is next to be defined. An educated man is, I take it, one in whom the imaginative faculties, the reasoning faculties, and the observing faculties have all been properly and adequately developed,—developed to such a degree that each becomes a usable tool for accomplishing the work in hand to do.

The imaginative man should be trained to reason and observe, to a degree. The reasoning man, devoid of imagination and unable to observe, becomes, whether in religion, in politics, or in philosophy, notoriously a pitfall. On the other hand, the observing man finds himself at fault unless he can imagine and reason. No man, moreover, is fit to be called educated unless in him each group of faculties has been supplied and trained. Newton, for instance, observed an apple drop; he fell back on his imagination; his mathematics did the rest.

Judged by this test, who of us can claim to be an educated man,—a well-developed mental athlete? Let each recall his own experience. Mine can be very briefly told. I went to Harvard at eighteen, entering the Sophomore class;—what did I then know of my own aptitudes and limitations? What even glimmering perception had I of that mental training of which I stood in most crying need? Now, too late, I realize that I had not the slightest either of knowledge or of perception. I know that in my case, as in the case of every man I ever met, the education I most sorely needed was of those faculties in which I was most deficient. For example:—I suppose, as a result of this occasion, as often before, I shall presently find myself accused, possibly convicted, of much of what the critics are pleased to call “loose thinking” in this address. As a general rule I have noticed the term is a convenient one, used to describe any thinking or result of thought in which the person criticising fails to sympathize; but, assuming in the present case its truth, what does it imply? Simply that, as respects the reasoning faculties, my early education was neglected, a natural deficiency was not made good, to some extent at least. And this was indeed the case. But the deficiency is in my case to be laid at the door of the college elective system. I had no aptitude for mathematics,—for close reasoning in any form. I got rid of them under the Harvard elective system at the earliest moment possible. Like the others, I followed the line of least resistance,—my inclination to avoid labor in thought. We all did it then; they all do it now. It is the natural, as well as logical, outcome of the college elective system as at present in vogue. I

have ever since been laboring to make good that lack of early training.

In my case, what took its place in college? I browsed about, sampling this, that, and the other. I gave up the classics; I got rid of mathematics; and I have since learned that, educationally, the thing of all things I needed for my subsequent good, was a severe and continued training in mathematics and in Greek. I now devoutly wish I had never been allowed a choice. Whether I liked it or no, I should have been trained to reason closely; I should have been thoroly grounded in literature.

As to the observing faculties, in my college days their existence was unrecognized. In the *Life of Charles Darwin*, written by his son, there are some curious passages, throwing a vivid gleam of light on the educationalist and university point of view as it then existed here as well as in Great Britain. The son writes: "It is curious that my father often spoke of his Cambridge life as if it had been so much time wasted, forgetting that, altho the set studies of the place were barren enough for him, he yet gained in the highest degree the best advantages of a University life,—the contact with men and an opportunity for his mind to grow vigorously." The reason the father thus looked upon his University life as "so much time wasted" is explained earlier, when he says, in his autobiography, speaking of his boyhood,—"nothing could have been worse for the development of my mind than Dr. Butler's school (at Shrewsbury), as it was strictly classical, nothing else being taught, except a little ancient geography and history. The school as a means of education to me was simply a blank. Looking back as well as I can at my character during my school life, the only qualities which at this period promised well for the future, were, that I had strong and diversified tastes, much zeal for whatever interested me, and a keen pleasure in understanding any complex subject or thing." Towards the close of his school life, Darwin got hold of some books on chemistry, and being naturally of an observing turn of mind, he says they interested him greatly. He adds:—"This was the best part of my education at school, for it

showed me practically the meaning of experimental science. The fact that we worked at chemistry somehow got known at school, and as it was an unprecedented fact, I was nicknamed 'Gas.' I was also once publicly rebuked by the headmaster, Dr. Butler, for thus wasting my time on such useless subjects; and he called me very unjustly a 'poco curante.'" Transferred from Dr. Butler's school to Edinburgh University, and then to Cambridge, he says:

"During the three years which I spent at Cambridge my time was wasted, as far as the academical studies were concerned, as completely as at Edinburgh and at school. I attempted mathematics. The work was repugnant to me, chiefly from my not being able to see any meaning in the early steps in algebra. This impatience was very foolish, and in after years I have deeply regretted that I did not proceed far enough at least to understand something of the great leading principles of mathematics, for men thus endowed seem to have an extra sense. But I do not believe that I should ever have succeeded beyond a very low grade. With respect to Classics I did nothing except attend a few compulsory college lectures, and the attendance was almost nominal. Altho, as we shall presently see, there were some redeeming features in my life at Cambridge, my time was sadly wasted there, and worse than wasted."

Thus totally disqualified for the wise selection of his own college electives was one of the most remarkable minds England in all its long history has ever produced. Naturally, Darwin was above all an observer. For this branch of training the University, as then developed, furnished no opportunities. No provision was made for it; nor was the want considered worth supplying. It did not come within the sphere of University work as then understood. What his mind needed, however, was a thoro discipline in mathematics and in the classics. His imaginative powers were defective. So defective that, looking back at the age of sixty-seven, he wrote "later in life I wholly lost, to my great regret, all pleasure from poetry of any kind, including Shakespere." Incomparable as an observer, what Darwin's mind needed, as he himself later

noted, was literary development and mathematical training. But my immediate point is that, if Charles Darwin was, in his University days, quite unqualified to settle for himself the instruction he most needed to develop his faculties, what can be said in favor of the free elective system when applied to the average youth? Clearly, it is not calculated for the production of the well and symmetrically proportioned mind, with every faculty supplied and made available. Its logical tendency would be towards a slipshod and slovenly mode of thought in the average man, with exceptional instances either partially developed or developed abnormally.

Recurring once more to myself, to my own experience, I have already told the advice received during my college course; let me now add with perfect confidence that the course pursued, acting on my own unaided volition, was as wrong and mischievous, so far as my future was concerned, as it well could have been. On the other hand, it must be admitted that in those days advice on this subject was not within the student's reach or the college purview. Indeed, I can now easily picture to myself the outcome of a student's interview with a typical professor of that period had he been consulted as to a course best calculated to train the observing faculties. At first there would have been a bewilderment; his mind must have been allowed time to work over the possible connection of the habit of observing with any recognized conception of college training. Then the light would have dawned in his eyes, suffusing his face with intelligence, as he oracularly remarked: "Oh, yes!—Development of observing faculties; I see! I should by all means recommend a thoro grounding in the Greek and Latin grammars. Nothing like it to make boys construe correctly;—and what is that but correct observation?" But, on this subject, a very popular writer, Mr. A. Conan Doyle, has something to say in the instructive as well as entertaining volume known as *The adventures of Sherlock Holmes*. The amateur detective there critically remarks to his friend—"You see, but you do not observe. For example you have frequently seen the steps which lead up from the hall to this room."

"Frequently."

"How often?"

"Well, some hundreds of times."

"Then how many are there?"

"How many? I don't know."

"Quite so! You have not observed. And yet you have seen. That is just my point. Now, I know that there are just seventeen steps, because I have both seen and observed." I have already alluded to the familiar case of Newton and the apple; the great mathematician observed, where the college professor would only have seen a far from unusual occurrence. There is a like illustration of the difference in an anecdote I have heard, probably false, of Jenner in connection with his discovery of vaccination. It is said he was looking for a nurse to care for a well-developed case of smallpox. A milkmaid offered her services. The physician put the usual question: "Have you had the smallpox?" "No," answered the woman, "but I have had the cowpox." The practical fact that having had the cowpox rendered one immune to the smallpox was well known to every milkmaid, but not until an exceptionally intelligent physician was, so to speak, clubbed over the head with this reply did it dawn on any one that by giving a person the cowpox you might preserve him or her from the smallpox.

It is simply amazing to note the extent to which, liberally educated thru generations, having eyes we see, and yet fail to observe. Problems of greatest moment, when once solved obvious of solution, thus remain unsolved even by those most thoroly grounded in the humanities. Could a more striking instance be imagined than that of the mosquito? Immemorally we have gone on staggering under the burden of malaria and the terror of yellow fever; and, all the time, we have persisted in regarding the mosquito as an annoying and irritating but quite harmless insect of the order *Diptera*, against the bite of which hardly any precaution was taken. Recently the trained observer has turned his attention upon the buzzing torment the inobservant naturalist had carefully classified, and we slowly awoke to the fact that the serpent kingdom, combined with that of beasts of prey, are, so far as the human race is concerned,

comparatively speaking innocuous. The mosquito is more to be feared by man than the whole reptile creation.

Thus the work of the trained observer is of infinite importance in every branch of research. That the habit of careful observation can be educated is obvious; that it should be imparted early few will be disposed to deny; that even now it is recognized, except incidentally, in any college curriculum nobody pretends. Yet it is at the very foundation of every course in natural science, and, for that matter, of every course in social and applied science also. At Harvard they for two centuries lived and moved contentedly with implicit faith in the truth and finality of the Mosaic cosmogony; at last men came along who, in spite of their college training, observed as well as saw, and, like the baseless fabric of a vision, the faith of centuries melted away. Confronted by really observing eyes, it proved an insubstantial pageant. It was merely Sherlock Holmes's query in another form. Generation after generation those learned professors had walked the familiar streets and contemplated the everlasting hills,—all God's handiwork; and, until Agassiz enlightened them the significance of yonder boulder in the field, or those scratches on the stones by the wayside, or those layers of clay and gravel in the cutting, quite escaped their purblind gaze. The College taught the humanities and philosophy; the intelligent use of the eyes was beneath its dignity and none of its affair.

But the whole issue centers just there. What is its affair? So far as I have been able to ascertain thru twenty-five years of the discussions of the Harvard Board of which I have been a member, the authorities are as wide apart on that subject now as ever they were. There is no agreement; no united effort to a given end. Some still contend—I have heard them in debate—that the true end and aim of the college should be to send young men out into the world with their heads packed like valises with a choice assortment of odds-and-ends,—some of the humanities, a smattering of Greek and Latin of course, a fair supply of mathematics, samples of natural science, a specimen or two of the world's stock of history and so-called philosophies, with a superficial familiarity with the master-

pieces of literature. The young man whose head is thus loaded is, according to their view, well equipped. By him the college has done its whole duty. Next comes the prophet of the athletic dispensation. Do the authorities give proper attention to the intercollegiate contests? Class standing is all very well; but who is captain of the crew, or the football team, or the baseball nine? The great fear is lest the University "gets left" on the river, the diamond, or the gridiron. Next comes the utilitarian. His idea is that the college takes too much of the student's time for studies of no practical use in the life that now is. The college training should be of a business, or common-sense, character,—the humanities should be relegated to the background, and good, plain, bread-winning ends held steadily in view,—all else is what they contemptuously designate "mere culture." A grade higher up is the advocate of specialism. Impressed with the immensity and diversity of knowledge, he sets it down as the function of the college to prepare men to do that work for which they feel an aptitude, and to do nothing else. To that they should be trained from the kindergarten; and the college should stand aside, and content itself by aiding them in every way as they work out their internally inspired destinies.

From all these views of proper college end and aim I dissent. My own belief is that the college is simply an intellectual training-school,—a mental gymnasium; no more and no less. As it is the function of the gymnasium to turn out the athlete with no muscle developed at the expense of any other,—everything, back, shoulders, arms, legs, and lungs and heart in perfect proportion; so should it be the function of the college to turn out the student thoroly trained in the use of all his faculties, and suppld in all brain action. The end in view is not acquired knowledge, but the control of every faculty for the quick acquisition of knowledge.

With this definition in mind, let me close by picturing the ideal college of the future as, nearing the end, I see it. It is something very different from what I know by experience was; or from what my observation tells me is. It is what, as I see it now, I required, but did not get; it is what my observa-

tion leads me confidently to believe those of the coming generation with whom I chance to be in contact ought to have.

Fifty-four years ago, when the class of 1856 entered Harvard, the college,—and, be it remembered always it is the college, the undergraduate department alone, we are considering,—the college, as I have already said, in 1852, reported 320 students,—four classes, averaging exactly 80 members each. It was what would now be considered a small college,—today Williams, Tufts, Amherst, Brunswick, and Dartmouth average 600 undergraduates each, 150 members to every class. One and all they are larger than Harvard then was. Harvard, accordingly, in 1850 was of just the proper size to allow in theory of close personal touch between instructor and student. Every one, professor or student,—teacher or taught,—connected with the institution was supposedly individual. What in my own case that touch amounted to I have already set forth. A more complete separation of the mature from the immature could hardly have existed. But assuming that 80 is the proper limit of a college,—that number of students a competent master can familiarize himself with personally and individually influence, mind acting on mind,—in that case Harvard then would have numbered four separate colleges,—we will say Holworthy, Stoughton, Hollis, and Holden, each with its own directing head and mind,—President, Dean, Chancellor, Master, however he might have been designated. Now, there would be some twenty or more such colleges. Presumably each college would have its specialty,—that line of instruction and electives to which its master most inclined,—classics, mathematics, history, physics, philosophy, and so on. Selecting his college as he inclined in his studies or for traditional reasons, the incoming student would on its books inscribe his name. Passing his admittance examination at the preparatory school at Andover, or Exeter, or Concord, or Groton, selecting perhaps the college more especially devoted to the classics, at the proper time he would present himself to, we will say, the Master of Holworthy. Like a young horse going from the training field to the racing stables, a record or pedigree and performances would have preceded him, and be in the

hands of the Master. Then, face to face, the two would proceed to "size" each other. The result would be a program of study reaching forward thru the entire college course,—studies prescribed and elective, only to be changed with the consent and upon the advice of the Master. Had such a system been in use during the mid-decenniums of the last century, I now know well enough what my college course ought to have been,—what it might have been had I been blessed with guidance, wise or kindly; something, I everlastingly regret to say, wholly different from what it was. Grouping the faculties, and giving due emphasis to aptitudes and inclination, to the account of the imaginative qualities would have been assigned Greek, German, and English, all to be followed up systematically, consecutively, and persistently from the day of entrance to that of graduation. To this I would readily have assented. Not so when it next came to providing for the suppling and developing of my reasoning faculties. For that, a continuous course in mathematics was necessary; and, even now, I can hear myself vigorously protesting, earnestly pleading against it. I hated mathematics. I had no aptitude for figures or demonstrations; I never could attain any considerable degree of algebraic or geometric proficiency. Then would have come in the counsel of the maturer mind. "Young man," the Master would have said, "you have now given a conclusive reason for the selection of that study as an elective in your particular case. Your mind calls for just that discipline. Loose, easy thinking is your besetting weakness. Mentally, you are active-minded; also slovenly. Above all else you must accustom yourself to following out a train of thought at once exact and sustained to a given result." And, so saying, he would have simply uttered truth. I know it now. Accordingly, mathematics, diversified possibly by logic, would in my case have been prescribed for the entire college course,—from its A to its Z. Next, provision would have been made for the observing faculty; and, again, having eyes I saw, and ever since have seen, at best but imperfectly. I stood in great need of a severe training in observation,—courses in chemistry, geology, botany, and forestry should have been provided. I

should have been compelled to take note. And thus my college course would have been mapped out for me on scientific considerations from my own commencement to my college commencement. Would that it might so have been!

But possibly, or more probably as matters of certainty, it will be said that, for an educated man, such a course as that outlined would be strangely defective. Where, for instance, are history and political economy? Where physics, metaphysics, and moral philosophy? The idea of calling a man educated who knows nothing of these branches of knowledge. Even so! But, trained to reason and observe, with each faculty developed as a tool to the hand of the artisan, no longer an apprentice, for what branches of research would I not have been equipped? To him who can imagine, reason, observe, and express himself, all knowledge becomes an open book.

For him who graduated half a century ago, the game is now either won to a degree or irretrievably lost. But, reviewing his record, he is apt to see with great distinctness the nature of the game, and wherein his play was defective, wherein correct. For myself, thus retrospectively, I am constrained to say that, as a training-place for the game in which I was to take a hand, the college of the period,—and Harvard stood first among them,—viewed as a mental gymnasium, was ill-adapted to existing conditions, unsympathetic, and, as respects organization, already distinctly outgrown. In the matter of intellectual training, it was a period of transition,—the system of prescribed studies was yielding to a theory of electives. So far as it had then been developed and applied, the new system proved in my experience a delusion, a pitfall, and a snare. My observation, as I said in the beginning, leads me to apprehend that conditions in these respects have not since changed for the better. The old organization yet lumbers along; the implicit belief in the pursuit of aptitudes on lines of least resistance is in fullest vogue. Could I, on the contrary, have my way I would now break our traditional academic system into fragments, as something which had long since done its work, and is now quite outgrown; and I would somehow get back to the close contact of mind upon mind. I would

to a large extent do away with this arms'-length lecture-room education for the college period. I would develop an elective system based on scientific principles, and the study of the individual; properly regulated, it should be intelligently applied. I would prescribe one of the classic tongues, Greek or Latin, as a compulsory study to the day of graduation, the one royal road to a knowledge of all that is finest in letters and in art. I would force every student to reason closely all thru his college days; while no man not trained to observe, and equal to tests in observation, should receive a degree. Beyond this I would let the student elect. He might follow his aptitudes.

Having thus spoken, I submit what is said as a species of *Apologia pro vita mea*. My generation was never properly trained; like our contemporaneous Topsy, "we just grewed."

CHARLES FRANCIS ADAMS

BOSTON, MASS.

III

CHARACTER OF THE SCIENTIFIC INVESTIGATOR

The educated public needs to obtain a clearer idea than it now has of scientific research, of its objects and results, and of the character and capacity of the men who devote themselves to it. The educated classes have a tolerably accurate conception of research in such subjects as history including antiquities, economics, philology, law, and government; for research in these subjects relates chiefly to the past, remote or near. The public has also been long interested in the inventor's resourceful and persevering habit of mind—the inventor who is trying to make some new application of acquired knowledge, or to discover a new fact or principle which can be put to commercial use. But scientific research is somewhat different from these other kinds of research. It has deep roots in the past; but its object is never to demonstrate merely what has been done or said. Invariably its object is to extend the boundaries of knowledge, and to win new power over nature. It is not chiefly concerned to enlarge records of the past or to make them more accurate, but rather to use all the powers the past has conferred on the human spirit to win new power. The past gives the scientific investigator his lever and the present his fulcrum; but his work is to take effect on the future, and is to give him or his successors a stronger lever and a better placed fulcrum. As a rule scientific research is carried on with no public observation and as silently as nature elaborates and throws out the mantling verdure of spring; but on an exceptional occasion like this, and in a country which has already reaped great benefits from the endowment of institutions of education and charity by public-spirited persons, it is fitting that the beneficent work of the scientific investigator should

¹ An address delivered at the formal opening of the Laboratories of the Rockefeller Institute for Medical Research, New York, May 11, 1906.

be accurately described and commended to the favor of an enlightened public opinion.

Let us first consider what mental habits and powers the scientific investigator needs to have acquired and to keep in exercise, or in other words what sort of a mind the medical investigator ought to have. In the first place, he needs the faculty and the habit of determining and grasping facts, and then verifying and digesting them. He must next be capable of conceiving hypotheses which will connect his facts, or explanations that will group them or arrange them in a series. These hypotheses or explanations will come to him as results of reflection or of imaginative scheming; in the common phrase, ideas will occur to him. A preconceived idea may be a great power in experimental researches; but the inquirer must have the habit of pursuing to verification or disproof all such ideas. He must test them by new experiments contrived for that purpose. He must exhaust all the adverse hypotheses which come to his mind. He must always keep in the road that leads to truth, altho he does not know just where the truth lies. If, thru the play of his imagination, he gets off the road, his rigorous experimentation must bring him back to the safe path of the inductive method. He must possess patience and reserve, but also enthusiasm and a capacity for eager speculation. Science has often profited by a suggestive theory which was far from being true. Indeed, the history of scientific progress is full of these profitable theories, which have been abandoned one after the other; and in all probability the series of such theories will prove to be infinite. Sometimes theories long forgotten are taken up again after the defeat of the later theories which caused the forgetting of the earlier. However it may be in theology, it is quite certain that in science there is as yet no such thing as final truth. Accordingly, investigators in any science need an unusual perspicacity or clear-sightedness in regard to its theories; they need, each in his own field, a full knowledge of the work already done, and a clear perception of the bearings of the most recent discoveries. This perspicacity is in some measure a natural gift; but it is also a faculty capable of a high degree of

training. It sees clearly the approximate truth already discovered, and goes forward to obtain a closer approximation.

The characteristic features of scientific research are similar in all fields, altho each kind has its peculiar difficulties. The field of the individual inquirer need not necessarily be wide; altho the progress of many sciences is often contributory to the progress of one, and that investigator has a great advantage who is capable of seeing clearly the bearings of new discoveries in kindred sciences on the particular inquiry he has in hand. It is all-important, however, in all fields, that the investigator should be capable of seizing on the essential parts of the inquiry—that is, on its causative elements, rather than on those parts which relate to identification, classification, and nomenclature. The pioneers of science, like the pioneers in exploration and colonization, must find their way thru pathless regions. It is only later generations that build smooth roads and railways for the transportation of inattentive multitudes where the pioneer trod alone and watchful. The investigator must be watchful over minor details and for apparently insignificant differences and similitudes. He must know how to find his clues in trifling circumstances and illusive changes of condition. In these days of germs and spores, when microorganisms have been proved to be infinitely important in the economy of nature, the investigator, and especially the biologist, will probably have a peculiar conception of the great and the small, or the gross and the minute. The infinitely little may often seem to him of highest importance, his scale of values having no connection with spacial magnitude or gravity. On the other hand, the investigator must be keen to discern relationships among facts—first among facts easily classed as kindred, but then among facts which to the common mind are unconnected or disconnected. The intellectual tastes of the true investigator will usually include a liking for an elucidation of mysteries and a liking for new and adventurous problems. These tastes are manifested by men whose walks of life and objects of interest are very different; but they are not common tastes, any more than the faculties needed in such inquiries are common. The scientific investigator wins pleasure

or satisfaction where most men and women would find only vexation and futile effort. He finds fascinating what most men and women would find repellent.

After a new discovery has been made, another and quite different task awaits the successful investigator. He desires and needs to procure the acceptance of his discovery by the learned world, and in some cases by the commercial world. This is a process different from the process of discovery, and yet kindred. It involves inventing demonstrations; and these demonstrations require a somewhat different sort of imagining and contriving from that which led to the discovery. The discovery was made in private; the demonstrations must be public. The discovery needed solitary reflection; to procure the acceptance of the discovery needs a power of public exposition, accompanied by debate and even controversy. The discovery required indomitable patience and energy in pursuing and verifying in rapid succession the conceptions or fancies of genius; the demonstration requires skill in discussion, courage in accepting public tests, and in taking responsibility for risking the property or lives of others.

The history of scientific research amply illustrates the stimulating value of controversy, and the contribution which free discussion makes to real progress. Freedom of thought and speech promotes progress towards truth in science just as effectively as it does the gradual attainment of truth and justice in government, industries, and social structure. Time frequently shows that both sides were measurably right in honest scientific controversies, altho one side win a temporary or even an ultimate victory.

The conditions under which research is necessarily performed deprive the investigators of the stimulus which numbers of students give to popular teachers. The laboratories of research contain but few students, and they are for the most part silent and absorbed. Nevertheless, the younger investigators have two great satisfactions in their work; they follow leaders with hearty enthusiasm and loyalty, and the generous ones among them also maintain a stimulating comradeship with contemporaries in the same fields. Their number is very

small in all the contemporaneous fields of inquiry put together; but it is on this small number that the real progress of any nation in the arts and sciences, and therefore in civilization and happiness, ultimately depends. Their Herculean labors are self-imposed, and they must set their own standards of excellence; for society cannot supply men capable of supervising, regulating, or stimulating them. The ordinary grades of public instruction can be supervised and disciplined; but the scientific investigator must be a law unto himself. The utmost that governments or universities can do for him is to provide suitable facilities and conditions for his work, and then watch for results.

Among the numerous varieties of scientific research such as chemical, physical, physiographical, astronomical, and biological, medical research occupies a peculiar place. While it avails itself to the utmost of all the exact weighings and measurements of the other natural sciences, it is forced to deal with innumerable materials and conditions which are complicated and made obscure by vital forces. It has to deal with objects which are alive and with processes of organic growth or change. Its evidence cannot always be exact; its experiments must often be complicated and obscured by vital reactions; and its results of highest value are often incapable of complete demonstration in the mathematical, physical, or chemical sense, because dense shades of ignorance darken the environs of the practical result. Thus, preventive measures against a familiar and definite disease may succeed, while the promoting cause of the disease remains unknown, and the method of its transmission from one victim to another is but imperfectly understood. Vaccination succeeded when the cause or promoting condition of smallpox was unknown. The microbe of rabies is unknown; and yet protective inoculation against rabies has been invented and successfully applied. The mere mention of some of the contributory inventions and discoveries of the past fifty years, such as the principles of fermentation, artificial culture solutions, gelatine plate cultures, selective cultivation, the variety of sterilization conditions for different organic substances, staining technique, immunity thru the use of a toxic organ-

ism that can be cultivated, increasing or diminishing at pleasure the virulence of a toxic organism, and testing toxins and vaccines on living animals, will readily satisfy even a skeptical mind that medical research has great difficulties of its own to encounter in addition to the usual difficulty of scientific inquiry in general. Biological research is, therefore, more arduous than physical, chemical, or other inorganic research; because vital processes are difficult to observe accurately, and all the conditions of experimentation are harder to control. The medical investigator must often fish in troubled waters; and sometimes he cannot find again the promising fishing ground he has once visited, because unexpected fog prevents him from seeing the intersecting bearings of his desired ground.

Again, medical research habitually strives to arrive at something beyond abstract truth. It seeks to promote public and private safety and happiness, and the material welfare of society. Its devotees have in mind the discovery of means of remedying misery or warding off calamity; and they also know that whatever contributes to health and longevity in any community or nation contributes to its industrial prosperity; so that they are justified in hoping for results from their work which will promote human welfare. In short, medical research is research in science which is both pure and applied. Some genuine scientists affect to despise applied science; and certainly it is not discreditable to men of science that they are apt to value discoveries which have no popular quality or commercial utility more highly than those which immediately attract the favor of the multitude by their industrial effects, or by their striking novelty combined with intelligibility; but all scientists recognize the fact that medical research is directly related to the largest material interests of the community, such as manufacturing, transportation, sanitation, and the methods of providing light, heat, and shelter, and of defending the community against frauds in foods, drinks, and drugs. Many of these problems are economic as well as medical, and require in those who study them sound judgment in money matters as well as knowledge of natural law, and skill in scientific

methods of inquiry. Medical research, therefore, requires in its devotees a combination of theoretical power with practical power—a capacity for both abstract science and applied science. This combination is rare, but by no means unattainable. Indeed, abstruse speculation is almost always attractive to masters of the experimental method. The investigator absolutely needs a powerful imagination; but this imagination must be checked by the most rigorous experimentation.

In spite of the fact that medical research involves the suffering and death of many of the lower animals used for purposes of study, the work of medical research is in reality the most humane work now done in the world; for its secondary objects are to prevent disease in men and animals, to defeat the foes of life, to prevent the industrial losses due to sickness and untimely death among men and domestic animals, and to lessen the anxieties, terrors, and actual calamities which impair or crush out human happiness. The primary object in medical research, as indeed in all research, is the ascertaining of truth; but these secondary objects are ever before the mind of the investigator, and thru them come his greatest satisfactions. These satisfactions ought to be shared by men who, like the founder of this Institute, promote medical research by the exercise of their sound judgment and good will and by their money.

The achievements of medical research since Jenner have been marvelous. Seeing what has been done within a century to diminish the mental and bodily sufferings of mankind from smallpox, diphtheria, rabies, tuberculosis, malaria, yellow fever, puerperal fever, and typhoid fever, and to give surgery safe access to every part of the body, we may reasonably believe that equal triumphs, and even greater, await it in the future. May we not hope that America will contribute her full share to the progress of scientific research, finding no obstacle, but rather means of furtherance, in her democratic institutions? May not we democrats find encouragement in the humble origin of Franklin, Faraday, and Pasteur, and in the contributions democratic America has already made to anæsthesia, surgery, the improvement of public water-sup-

plies, and the control of Texan fever, malaria, and yellow fever? May we not reasonably expect our country to produce many men like Louis Pasteur's father, a private soldier of the first Empire and a hard-working tanner? In the dedication of his best book the great Pasteur said to his father: "The efforts I have devoted to these investigations and their predecessors are the fruit of thy example and thy counsel." Let American parents take that sentence to heart. And let all Americans reflect on another utterance of this greatest of contributors to medical science, this ardent patriot, this independent and indomitable worker, this genuine democrat—Pasteur:—"The true democracy is that which permits each individual to put forth his maximum of effort."

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IV

BIBLIOGRAPHY OF EDUCATION FOR 1905¹ (I)

Compiled by James Ingersoll Wyer, Jr., Reference Librarian, New York State Library, and Mabel E. Leonard, New York State Library School

INTRODUCTION

This bibliography is the seventh similar annual summary of educational literature. The first six numbers are to be found in the *EDUCATIONAL REVIEW* for April, 1900; April, 1901; June, 1902, 1903, 1904 and 1905. The great difficulty of collecting and actually examining the scattered books and periodicals printed in this country and Great Britain has made it impossible to prepare this work in time for the June number of the *REVIEW*.

The list is planned to include:

- a. Books on educational subjects printed in English and bearing the imprint date 1905.
- b. Important articles on the same subject from the periodicals of 1905.
- c. Valuable papers published in the transactions of educational societies that bear the imprint date 1905.
- d. All chapters of distinct educational interest from any books bearing date 1905, and all notable matter on educational topics published during 1905, wherever found.

It does not include:

- a. Purely local current literature of separate institutions, provinces, colonies, or states. For all such material the student is referred to reports of state departments and of the thousands of educational institutions in this country, in Great Britain, and in the colonies.
- b. Unimportant matter, such as is being constantly published in journals.
- c. Text-books.
- d. New editions with slight and unimportant changes.

The distinctive features of the compilation are:

- a. The careful analysis of all important periodicals.
- b. The liberal annotation.
- c. The classification by subject matter so that the worker in any line may

¹ Owing to the particular timeliness of the article by Professor Sadler, and the address of Mr. Charles Francis Adams, it has been found advisable to separate the *Bibliography of education*, which otherwise would have been published entire in this number of the *REVIEW*. The second half of the *Bibliography* will be printed in the October number.

find together the literature of interest to him. The Decimal Classification has, with a few deviations, been followed, both as being on the whole the most satisfactory classification in use, and as being very widely used by libraries.

A detailed outline of the classification precedes the bibliography, and is so full as to serve readily as a subject index. An author index of names is appended.

Unanimity, or even general agreement, cannot be hoped for as to the selection, from the vast range of the annual literature on educational topics, of the articles that are best worth mention in a list like this, a list aiming at selection rather than completeness. Many of the current contributions appear in the proceedings of educational societies, and when the annual volume of papers and addresses of the National Educational Association, the most important body of educators in the country, contains so much that, however pertinent and profitable it may have been as originally given, is trivial or worthless when considered for the purposes of this bibliography, the task of the bibliographer in examining the annual grist of similar grain is not an easy one. It has, indeed, seemed wisest in case of doubt to include certain titles of apparently indifferent value rather than to risk the omission of articles that might be helpful to someone.

It is not claimed that all the matter listed here has permanent value. Much of it is but current chronicle, yet as such topics are to-morrow matters of educational history, it seems proper to include some of the most important literature relating to them. Indeed, several titles that seem to have no value at all are included because they appear under such auspices or in such pretentious form as to promise value, and it is thought important to list such items with a word of warning.

According to custom, the compilers submit the following twenty-two titles as fairly representing the cream of the year's literature—books that should be found in every educational library (and probably in most public libraries as well) and that should be read by or accurately known to all serious students of education or to those particularly interested in the special topics treated. Educational literature in 1905 offered almost no really notable titles, and many of the books in the following short list represent only either industrious and intelligent statistic-gathering; useful compilation and editing or plain, straightforward relation of actual experiences which seem to promise value to fellow-workers. From the point of view of the public library that wishes to buy only the best for its special purpose, these books are of two kinds, the rather technical treatise of import chiefly to the educational specialist (admirably typified by numbers 12-16 below) and the more popular work of general interest. Any hard-and-fast division on these lines is manifestly impossible, but so far as individual judgment is valid the compilers consider numbers, 5, 7, 10, 18, 19, 21 and 22 to be of the latter type and perhaps better suited than the others to the small public library unable to buy all the books named below.

Full title, publisher, price and descriptive notes will be found, thru the index, where each book is entered in the bibliography under its proper subject.

- 1 Bagley—The educative process.
- 2 Raymont—Principles of education.
- 3 Lodge—School teaching and school reform.
- 4 Salisbury—The theory of teaching and elementary psychology.
- 5 Monroe—Text-book in the history of education.
- 6 Painter—Great pedagogical essays.
- 7 Wilkins—Roman education.
- 8 Bryant—How to tell stories to children.
- 9 Payne—Public elementary school curricula.
- 10 Harper—Trend in higher education.
- 11 Moore—The school house.
- 12 Cubberley—School funds and their apportionment.
- 13 Elliott—Some fiscal aspects of public education in American cities.
- 14 National educational ass'n.—Report of committee on taxation as related to public education.
- 15 National educational ass'n.—Report of committee on salaries, tenure and pensions of teachers.
- 16 Strayer—City school expenditures.
- 17 Brumbaugh—Making of a teacher.
- 18 Lawrance—How to conduct a Sunday school.
- 19 Religious education association—Proceedings.
- 20 Wells—Sunday school problems.
- 21 From servitude to service.
- 22 Washington—Tuskegee and its people.

The titles are grouped by subjects. The first two books are serious contributions to the nature and significance of education and the theory underlying the art of teaching. Mr. Bagley's book (No. 1) is an admirable application of the biologic and psychologic principles of educational theory to the topics and problems usually included under the terms "general method" and "method of the recitation." His exposition and argument lose much in effectiveness for most lay readers from their abundant psychological terminology, orthodox and sound no doubt but easily understood only by the very elect. Mr. Raymont's volume (No. 2) is the work of a British professor and is a refreshing contrast to the American book both in direct practical style and in its frank and sensible refusal to ko-tow to the ultra-psychological joss (josh) of the present day. Numbers 3 and 4 are alike only in that each relates to teaching. Mr. Lodge has printed in a thin but weighty book four lectures to English secondary teachers in which he frankly questions some current ideas and ideals and states in strong and brilliant sentences what he conceives good education to be. Mr. Salisbury (No. 4), one of the oldest American normal school workers, has combined psychological theory and twenty years' experience in a helpful volume.

Numbers 5, 6 and 7 all relate to educational history. Mr. Monroe's textbook is the most satisfactory single volume general history of education yet published. Mr. Painter's compilation finds place in this list only because it should prove a useful grouping under one cover, of otherwise scattered source material. Mr. Wilkins has presented from his accurate and full information all that is surely known of ancient Roman education. Numbers 8 and 9 have to do with elementary education, the former tells why and how the world-old medium for mother's-knee education has been adopted as a formal pedagogical process both in schools and libraries. Number 9 is a comparative statistical study of the content, time allowance, grades in which taught and probable relative importance of subjects in the elementary curricula of the United States, England, Germany and France. The twenty-three short chapters in President Harper's book (No. 10) and its being a collection of occasional papers and addresses, make it somewhat "scrappy," but many of its sentences are significant and the volume gives a fair notion of the great range of activities comprised within the administration of higher education.

Number 11 is a chapter from the eighteen years' experience of a Massachusetts inspector of public buildings. It discusses small and moderate sized buildings and is full of practical plans, tables and suggestions.

To Columbia University (Teachers College) and the N. E. A. we owe the next group of titles (Nos. 12-16). Any one of them would be noteworthy at any time but it is quite remarkable that 5 such careful and important statistical studies in the fiscal aspects of American education should be published within a single year. It is such work which must form the basis for sound generalization and specific argument.

Ever since the first meeting of the Religious education association four years ago we have had more and better books on this subject than on any other single phase of education. This will be strikingly apparent from an examination of the section 377 in each of the six earlier numbers of this bibliography. Numbers 17-20 are this year's best books, two of them, Lawrance and Wells, treating of practice not principles and drawn from abundant experience; another (No. 17) intended primarily for Sunday-school teachers will interest and profit almost equally the secular teacher also. No. 19 maintains the high standard both in conception and content, which has been set in the two previous volumes of the Proceedings of the Religious education associaton.

There have been books before about Tuskegee and its principal, but none so eloquent of the work which the school is doing as No. 22 on the above list, which is chiefly made up of autobiographical statements by its graduates now at work, of what they have done since leaving school.

No. 21 sketches in separate chapters the history and work of the six foremost negro colleges and schools.

The compilers will welcome criticism or suggestion which may make the work more useful. They offer this seventh number with diffidence, but with a hope that it may be of service.

OUTLINE OF CLASSIFICATION

Bibliography.

370 EDUCATION, THEORY, PHILOSOPHY.

370.1 Psychology and education.

370.5 Periodicals.

370.6 Associations.

370.7 Normal schools.

370.9 General histories of education: historical material for special countries arranged alphabetically by countries.

370.92 Biography.

371 TEACHERS, METHODS, DISCIPLINE.

371.1 Teachers.

371.12 Training of teachers.

371.16 Salaries for teachers.

371.17 Pensions for teachers.

371.2 School organization; the superintendent.

371.26 Marking systems.

371.27 Examinations.

371.3 Methods of instruction (For methods in special branches see 375 and its subdivisions).

371.42 Manual training.

371.5 Government, discipline, punishment.

371.52 Truancy.

371.6 School buildings, furniture, apparatus.

371.64 School libraries; public libraries and schools.

371.7 School hygiene.

371.73 Physical training, gymnastics, athletics.

371.8 Student life, customs and organizations.

371.9 Education of special classes, defectives, delinquents.

371.94 Negro.

371.95 Indian.

372 ELEMENTARY EDUCATION

372.2 Kindergarten.

373 SECONDARY EDUCATION OTHER THAN PUBLIC, arranged alphabetically by countries.

375 CURRICULUM.

375.04 Elective studies.

375.2-375.9 Methods of teaching special subjects, divided according to decimal classification.

376 EDUCATION OF WOMEN.

376.7 Co-education.

377 RELIGIOUS AND ETHICAL INSTRUCTION

378 HIGHER EDUCATION; COLLEGES AND UNIVERSITIES; for special countries, arranged alphabetically by countries.

378.01 College entrance requirements.

378.2 Academic degrees.

378.3 Graduate instruction and work. Research.

379 PUBLIC SECONDARY EDUCATION

- 379.11 Taxation for schools. School funds and finances.
- 379.14 School laws.
- 379.15 School supervision (a) city, (b) rural.
- 379.2 Illiteracy.
- 379.23 Compulsory education.
- 379.5 Secondary schools and systems of public education in special countries; arranged alphabetically by countries.

The abbreviations used are ordinary ones easily comprehended. Volume and page are separated by the colon. Thus 6: 386-407 means Vol. 6, pages 386 to 407. N. E. A. Proc. is, of course, National Educational Association, Journal of Proceedings. The report of the U. S. Commissioner of Education, is nowhere entered as a whole, but each important article appears under its appropriate subject. An excellent summary of contents in the introduction makes the use of the volumes easier and more profitable. No date beyond the month is given in the references, as 1905 is always understood.

BIBLIOGRAPHY OF EDUCATION, 1905

Bibliography

- 1 **Bibliography of educational books** (in Schoolmasters' Year book, 1906. Sonnenschein, 5s. p. 388-431.)
Includes books published from Nov. 1, 1904, to Oct. 31, 1905. Classified arrangement, with some annotations. A select list of articles on educational subjects, a list of educational magazines and of annual publications, as calendars, &c., is also to be found here.
- 2 **Meyer, E. C.** Literature on industrial education in Germany. (In his Industrial education and industrial conditions in Germany. Government printing office, Wash., 25c. p. 145-47.) (U. S.—Commerce and labor, Dep't. of Bureau of Statistics. Special consular reports. v. 33.)
Includes works in English and German; is classified and quite full.
- 3 **Wyer, J. I.** Recent educational bibliography. (School rev. Oct. 13: 648-53.)
In this eighth similar annual list, twenty-seven items are reviewed which will not be listed here.
- 4 ——— and **Lord, I. E.** Bibliography of education for 1904. (Educ. rev. June. 30: 41-93.)
Sixth similar annotated list of educational literature in English.

370 EDUCATION—THEORY, PHILOSOPHY

- 5 **Andrew, M. F.** Phases of modern education, III. The problem of individualizing instruction. (Educ. Nov. 26: 129-36.)
Individual and mass instruction contrasted, with emphasis upon the need of and good effects resulting from the former method.

- 6 **Bailey, L. H.** The school of the future. (In his *Outlook to Nature*. Macmillan, \$1.25. p. 143-230.)
A practical and optimistic view of the tendencies in education, discussing the school of affairs, the evolution of schools, the rural schools and the ways and means. A real help to needed reform in school work and ideals.
- 7 **Bair, J. H.** What is education? (In *University of Colorado. Investigations of the departments of psychology and education.* v. 2, no. 2. p. 9-20.)
"It was attempted to show, in the discussion, that a comprehensive conception of what education really is, implies a knowledge of the factors involved in the progress and civilization of the race; that a knowledge of these factors, made possible thru a study of history and ethnology, will give the educator insight and will go far towards the efficient development of a science of education. Success in teaching depends on the efficient development and control of the pupil's imagery."
- 8 **Beckwith, W. P.** Drill: a chapter of pedagogy. 22 p. D. Newcomb & Gauss, Salem, Mass., 25c.
A theoretical discussion of drill in educational work, with suggestions for the lines along which it should be developed. Readable and inspiring.
- 9 **Birney, Alice (McLellan).** Childhood: with an introduction by G. Stanley Hall. 254 p. D. Stokes, \$1.
- 10 **Bourne, George.** The ladder of education. (Macmillan, Apr. 91: 471-80.)
Suggestions concerning conditions and methods, offered to those anxious to mold the character of and educate the laboring people.
- 11 **Brown, E. E.** Present problems in the theory of education. (*Educ. rev. Jan. 29: 38-61.*)
Read before the International Congress of Arts and Science, St. Louis, Mo., Sept., 1904.
A consideration of the problems under the following heads: 1. Method of educational research.—2. The central group of problems relating immediately to the art of education.—3. The second group: institutional problems. 4. The third group: psychological problems. The central group of problems: further considerations.
- 12 **Bryan, E. B.** Basis of practical teaching: a book in pedagogy. 190 p. D. Silver, Burdett, \$1.25.
Practical, untechnical and convincing essays presenting their topics in popular form. A clear-cut, logical and progressive presentation of old and new thoughts, of interest alike to parents, teachers and educators.
- 13 **Chapin, H. D.** Education; the question of training. (In his *Vital questions*. Crowell, \$1. p. 121-33.)
A general discussion of the necessity and manner of education by the State, and of the need of a fairer balance between secondary and higher education.
- 14 **Dawson, G. E.** Levels of development in relation to education (*Jour. of ped. Sept. 18: 9-24.*)
Taking the biological view of mind and education, as also including the intellectualistic, the writer considers the levels of (1) Pure feeling.—(2) Instinct-activity.—(3) Sense-impressions.—(4) Ideational processes, in a child's development.

- 15 **Eliot, C. W.** The fundamental assumptions in the report of the Committee of Ten (1893). (*Educ. rev. Nov.* 30:325-43.)
 Read at the meeting of the American Institute of Instruction, at Portland, Me., July 11, 1905.
 Aims to show that the three principles pointed out by G. S. Hall in his work, "Adolescence," as fallacies enumerated by the Committee of Ten in their report, are, within the limitations stated in the Report, sound and permanent educational principles, on which alone a truly democratic school system can be based.
- 16 ——— Republican education. (In Schoolmasters' association of New York and vicinity. Twelfth annual report, 1904-5. p. 28-42.) Published also in *Outlook*, July. 30:740-44.
 Defines his subject as "education in a commonwealth; education for the sole benefit of the individual citizens." He explains definitely and in detail, just what traits right education should foster or develop. The subject is also informally discussed and amplified by Pres. Eliot and others.
- 17 **Fry, Edward.** Science and education. (*Contemp. rev.* 87:383-92.)
 A consideration of the "scientific" spirit introduced into present education and a warning lest it overshadow the value of morals in education.
- 18 **Green, I. A.** The educational ideas of Pestalozzi. 234 p. D. Clive, 1s.
 A simple exposition of Pestalozzi's fundamental doctrines. Schoolmasters' year book.
- 19 **Hall, G. S.** Citizens' initiative as a factor in educational progress. *Ped. sem. Dec.* 12:471-77.)
 Address before the Citizens' Educational Society, Worcester, Mass., May, 1905.
 A study of how city boards can work, what they do, and suggestions for increasing their usefulness.
- 20 ——— What is pedagogy? (*Ped. sem. Dec.* 12:375-83.)
 Introductory lecture to the popular Saturday courses, given at Clark University, Sept. 30, 1905.
 A general consideration of this department, of what it aims to do, and of its needs.
- 21 **Hodgson, Geraldine.** The place of personality in education. (*Jour. of educ. June.* 36:390-93.)
 A general discussion in which the importance of the individual over the curriculum and methods is emphasized.
- 22 **Hope, A. R.** The school-boy abroad. 316 p. O. A. & C. Black, 5s.
 A chatty volume, half fact and half fiction, being a contemporary account of schoolboys of every European nation as they picture themselves either in autobiographies or stories. "In Spain, Russia and Denmark the author has turned virgin soil."
- 23 **Hughes, R. E.** School training. 128 p. O. Clive, 2s.
 A well-written, suggestive and thoroughly up-to-date little book. Considers the aim of school training, the physical, intellectual and moral aims, and the school in its relation to the home, and the community.
- 24 **Jenks, J. W.** The social basis of education. (*Educ. rev. Dec.* 30:442-63.)
 A consideration of the social balance between society and the individual, and of how the social point of view affects the choice of a curriculum and of methods of teaching.

- 25 **Kappa**, pseud. Let youth but know. Methuen, 3s. 6p.

The practical use of present education is considered by this author, who is clearly not a schoolmaster by profession. The essays are brilliant, interesting and convincing, for the writer speaks from his own experience. No attempt is made to compile a manual of method, but were his suggestions followed, the value of educational work would be increased. He also includes two essays on athletics and ethics. Extracted from the *Athenæum*.

- 26 **Karr, Grant**. The means of education, with special reference to the course of study. (*Jour. of ped.* Mar. 17:185-98.)

A discussion of the means;—largely government, training and instruction.

- 27 **Lewis, F. C.** A study in formal discipline. (*School rev.* Apr. 13:281-92.)

"Object: 1. To analyze the whole subject of mental discipline with a view to bringing something like definiteness, clearness and order into a discussion too often indefinite, vague and tangled. 2. To describe an experimental test of formal discipline conducted by the Dartmouth Pedagogical Department."

- 28 **MacVannel, J. A.** The educational theories of Herbart and Froebel. 120 p. O. New York, Teachers College, Columbia University, 75c. (*Teachers coll, cont, to educ. no. 4.*)

A syllabus attempting, 1, "to outline the evolution of educational ideas from Rousseau to Froebel as an outcome of the more general movement in social theory; 2, to relate the educational theories of Herbart and Froebel to the wider intellectual movements of Romanticism, Realism and Idealism. As a whole, it aims to indicate the nature of philosophic method in the study of the evolution of educational ideas, rather than to increase the store of information concerning them." Preface.

CONTENTS.—The period and the point of view.—Rousseau and the problem of civilization in the eighteenth century.—The transition period.—Romanticism.—From Kant to Hegel: The idealistic interpretation of nature and history.—From Rousseau to Froebel: The evolution of educational ideas.—Realism in philosophy and education: Herbart.—The educational theories of Froebel.—Retrospect and conclusion.

"References" at end of each section, except section IX.

Published also in the Teachers College record, Sept. v. 6, No. 4.

- 29 **Marsh, H. A.** Point of view of modern education. 177 p. S. Public school co., 60c.

A collection of lectures before mothers' clubs "attempting to state in simple terms, the changes in educational ideas brought about by philosophical, scientific, social and religious thought." Bookman. The complex problems are settled in a naïve manner, the lectures are suggestive and the point of view—critical towards traditional school methods—differs somewhat from the formal and mechanical one often found in educational writings. The special topics treated are growth of the affections; the three nerve centers; the child and his teachers; influence.

- 30 **Martin, G. H.** A business basis for public schooling. (*Educ. Nov.* 26: 137-44.)

A plea for a businesslike attitude towards solving school problems.

- 31 **Mason, C. M.** School education. 367 p. D. Trübner, 3s. 6p. net. (*Home education ser. v. 3.*)

We uncover with profound respect before Miss Mason's five stout volumes in less than as many years, on educational topics. The aim of this one is "to offer some suggestions towards a curriculum for boys and girls under twelve." To these are added some very good exposition of sound, funda-

mental educational principles; some very direct discussion as to the relation between parents and children, parents and teachers and teachers and pupils.

- 32 **Maxwell, W. H.** Education for efficiency. (In *N. E. A. Proc.* p. 59-67.)

A definite exposition of what the aim of our present educational system is, and an educator's feelings towards it.

Printed also in the *Popular Science Monthly* for August, 67: 363-71.

- 33 **Parsons, E. C.** The aim of productive efficiency in education. (*Educ. rev. Dec.* 30: 500-6.)

- 34 **Raymont, T.** Principles of education. 381 p. D. Longmans, \$1.40. 1904.

"A notable success, at once readable and suggestive." *Academy*.

"A sane, interesting and comprehensive treatise on education, founded on the experience of the schoolmaster and the theory of the psychologist." *Athenæum*.

The author elucidates the meaning of education, then proceeds to discuss schools of different grades and their functions, while the best relations between education and the state are also explained. A chapter is devoted to the study of the children themselves. He also discusses the practice of education as an art, and considers the "material conditions of teaching." Some space is devoted to the moral aspects of training, a part which might well be read by parents as well as teachers.

- 35 **Spalding, J. L.** The meaning and worth of education. (In his *Religion and art, and other essays.* McClurg, \$1. p. 112-40.)

A stimulating and general consideration of this subject, laying stress on the benefits of education as gained after and outside as well as during the school life.

- 36 **Super, C. W.** What is it to be educated? (*Bibliotheca sacra*, Jan. 62: 146-57.)

Points which make for education, stated and discussed.

- 37 **Unwin, Raymond.** Education in the Garden City. (*Jour. of educ.* 37: 821-23.)

A presentation of the aim and mode of development of the educational system in the "Garden City."

- 38 **Watson, Foster.** Notices of some early English writers on education, 1553-1574, with descriptions, extracts and notes. (In *U. S.—Education, Comm'r of. Report of 1903.* 1: 319-50.)

Sidelights thrown upon the educational ideals and practice of that age, setting at rest many questions as to the schools of the home country in which our forefathers were educated.

- 39 **Wells, D. C.** The parent problem. (*School rev. Oct.* 13: 635-41.)

Read at the Conference at Dartmouth College, May, 1905.

A study of what the school has to meet with in the child from the influence of various kinds of parents.

- 40 **Westaway, F. W.** Humanism and realism: as forces in higher education. (*Jour. of educ.* May. 36: 335-37, July. 495-97.)

Outlines the position of the two and shows how they react upon education, even to special subjects. Emphasizes the necessity of a union between them.

- 41 **Woods, H. D.** School policy via school facts. (School rev. Sept. 13: 544-50.)

Statement of what has been done towards making educational statistics more uniform.

370.1. *Psychology and Education*

See also nos. 185 and 273.

- 42 **Benedict, M. K.** The direct use of psychology in teaching. (Educ. rev. Sept. 30: 201-6.)

Shows in a general way, how it is useful.

- 43 **Ellis, A. C.** The college course in the psychology of education; its aim, method, and subject-matter. (Teachers coll. record. Jan. 6: 1-19.)

- 44 **Horne, H. H.** The development and training of the will. (School rev. Oct. 13: 616-34.)

Read at the Conference at Dartmouth College, May, 1905.

A description of each stage in the development of will, considering, in connection with each, the corresponding training.

- 45 **Salisbury, Albert.** The theory of teaching and elementary psychology. 330 p. D. Century Book Co., \$1.25.

This treatise is designed for beginners in the study of educational psychology and pedagogy, to lay a foundation for each study and to give the student the necessary tools for working in the field of pedagogical thought. It is the result of twenty-years' experience of the author, who is President of the State Normal School, Whitewater, Wis.

Noticeably clear and modern in its exposition of the fundamental principles of psychology and their application to education; with great vitality and an absence of mechanization. Great skill is shown in leading the reader into a pedagogical attitude of mind.

Part I. deals with the meaning and end of education. Part II. deals with the elementary psychology and logic, and also includes reasoning, &c., with an account of the physiology of the nervous system. Part III., Principles of teaching, presents psychological truths and shows their application to school work.

370.5 *Periodicals*

A list of the educational periodicals of the year in the U. S. is given in v. 1 of each Report of the U. S. Comm'r of education. It is arranged by states and by subjects, but is unfortunately not as full or as accurate as it should be.

See also nos. 271, 330.

- 46 **University review.** Sherratt and Hughes, 9s. post free.

First number of this monthly review appeared in May, 1905. Is an organ of intercommunication between the universities. In addition to notes and news from universities and colleges of the United Kingdom, France, Germany and the United States, it contains articles by prominent men on various questions of common academic interest.

370.6 *Associations and societies*

Fulllest list of English Associations is found in the Journal of Education, vol. 37, p. 188-90. The latest list with officers and brief sketch found in the Schoolmasters' Yearbook for each year.

- 47 **American institute of instruction.** Seventy-fifth annual meeting, Portland, Me. 233 p. D. Bost., Amer. institute of instruction. No price.
 Proceedings, constitution, list of active members and abstracts of addresses upon various educational subjects.
- 48 **Association of American universities.** Journal of proceedings and addresses of the fifth annual conference held in New Haven, Feb. 18-20, 1904. 82 p. O. Assoc. No price.
- 49 **Association of American universities.** Journal of proceedings and addresses of the sixth annual conference held in Baltimore, Jan. 12-14, 1905. 66 p. O. Assoc. No price.
- 50 **Association of Catholic colleges of the U. S.** Report of proceedings of the seventh annual meeting held in New York, July 11-13, 1905. (In Catholic educational association. Report of the proceedings and addresses of the second annual meeting, 1905. p. 81-154.)
- 51 **Association of colleges and preparatory schools of the middle states and Maryland.** Proceedings of the eighteenth annual convention held at Princeton University, Nov. 25-26, 1904. 120 p. O. Assoc. No price.
- 52 **Association of colleges and preparatory schools of the southern states.** Proceedings of the eleventh annual meeting, Nashville, Tenn., Nov. 22-24, 1905. 49 p. O. J. H. Kirkland, Sec., Vanderbilt Univ., Nashville, Tenn. No price.
- 53 **Catholic educational association.** Report of the proceedings and addresses of the second annual meeting, New York, July 11, 12 and 13, 1905. 266 p. O. Rev. F. W. Howard, Sec'y., 1651 E. Main St., Columbus, O. No price.
- 54 **Conference for education in the south.** Proceedings of the eighth annual conference, Columbus, S. C., April 26-28, 1905. 166 p. O. Com. on publication, 54 William st., N. Y. No price.
- 55 **Conradi, Edward.** Learned societies and academies in early times. (Ped. sem. Dec. 12: 384-426.)
 A description and history of various ones, divided by locality and arranged largely chronologically, extending from the earliest times to about 1800. Contains a two-page bibliography.
- 56 **Lewis and Clark educational congress.** Portland, Or., 1905. Program, organization and addresses, Aug. 28 to Sept. 2, 1905. 121 p. O. Portland, Or., Anderson & Duniway Co.
 Auspices Lewis and Clark congresses committee and a committee of Pacific northwest educators.
 CONTENTS.—Convocation address, by W. T. Harris.—Unsettled questions in the organization and administration of the schools, by Andrew S. Draper.—The relation of the Pacific coast to education in the Orient, by Benjamin Ide Wheeler.—Education in a democracy, by F. Louis Soldan.—School extension and adult education, by Henry M. Leipziger.—Manual training, abstract of the address by Henry M. Leipziger.—The problem of the rural school, by J. H. Ackerman.—Higher agricultural education, by E. A. Bryan.—Education in reference to our future industrial and commercial development, by Howard J. Rogers.—Education and the state, by P. L. Campbell.

- 57 **McManis, J. T.** The Public school society of New York. (Educ. rev. Mar. 29: 303-II.)
A history of the society, and a statement of the causes for its being and its failure.
- 58 **Michigan schoolmasters' club.** Proceedings at the fortieth meeting held in Ann Arbor, Mar. 30-Apr. 1, 1905. 131 p. Q. Ann Arbor plant. No price.
- 59 **National association of state universities in the U. S.** Transactions and proceedings of the eighth and ninth meetings, St. Louis, Mo., June 27-28, and Des Moines, Iowa, Oct. 31-Nov. 1, 1904. 118 p. O. E. G. Fellows, Sec'y., Orono, Maine. No price.
- 60 **National educational association.** Journal of proceedings and addresses at the forty-fourth annual meeting, Asbury Park and Ocean Grove, N. J., July 3-7, 1905. 968 p. O. Irwin Shepard, Winona, Minn., \$2.
The important papers are separately noted under the proper headings in other parts of this bibliography.
- 61 **National society for the scientific study of education.** Fourth year-book. 2 pts; O. Univ. of Chic. press, \$1.25.
Pt. I.—The education and training of secondary teachers.
Pt. II.—The place of vocational subjects in the high school curriculum.
- 62 **National union of teachers.** Report for 1905 and list of members for the year 1904. 406 p. O. Union of teachers, I.s.
A handbook containing a fund of information relating to the English school-teachers. Gives statistics and regulations relating to the society and list of associations in the Union with the names and addresses of members. Make-up of the book is very poor.
- 63 **New England association of colleges and preparatory schools.** Addresses and proceedings of the twentieth annual meeting. 74 p. O. University of Chic. press. No price.
Reprinted from the School review.
- 64 **N. Y. (state)—Associated academic principals.** Proceedings of the twentieth annual conference, . . . 1904. 121 p. O. Alb., Educ. dep't. 25c. (N. Y. (state)—Education dep't.—Secondary education. Bulletin 29.)
- 65 **North central association of colleges and secondary schools.** Proceedings of the tenth annual meeting. 176 p. O. J. E. Armstrong, Englewood high school, Chicago, 25c.
The Historical sketch by the president, F. L. Bliss, p. 3-19, reviews the work of the association.
- 66 **Schoolmasters' association of New York and vicinity.** Twelfth annual report, 1904-05. 96 p. O. No place.
May be obtained by applying to Charles S. Hartwell, secretary, 473 Madison Street, Brooklyn, N. Y.

370.7 *Normal schools; The study of education*

See also the papers printed in the N. E. A. Proc., p. 517-55, under the Dep't of Normal Schools.

- 67 **Graves, F. P.** The educational museum of Paris. (School rev. Feb. 13: 127-38.)

A history and description of its aims and work.

- 68 **Hall, G. S.** A central pedagogical library and museum for Massachusetts. (Ped. sem. Dec. 12: 464-70.)

Address before the New England Library Association, May, 1905.

Outline of what such an institution should be, and would do.

- 69 **Lyte, E. O.** The state normal schools of the United States. (In U. S.—Education, Comm'r of. Report for 1903. 1: 1103-36.)

Discusses their origin, object, examinations and certificates, practice schools, courses of study, control and maintenance.

- 70 **Meriam, J. L.** Normal school education and efficiency in teaching. 153 p. O. Printed for the author, 75c. (Teachers coll. cont. to educ. no. 1.)

"These five studies relate to Normal Schools as training institutions, and to the efficiency of teachers in the elementary schools."

CONTENTS: 1. Psychology in the curriculum for teachers. Historical in nature.—2. Opinions of students as to the value of Normal school psychology. Results of questionnaire as to contribution of psychology to efficiency in teaching: conclusion that reform is needed.—3. On the correlation between teaching efficiency and scholarship. A statistical study.—4. General training of elementary teachers. Value of different preparations of teachers.—5. The instructors in the New York State Normal schools. Inquiry concerning the qualifications of teachers in the Normal schools of the state. The whole is doctor's thesis at Columbia.

- 71 **Oregon university.** Dep't. of education. State normal school systems of the United States. 43 p. O. Eugene, Or., University of Oregon. (University of Oregon. Bulletin, new ser., v. 2, no. 6.)

Compiled by H. D. Sheldon. Aims to present in brief and convenient form the most important facts, statistical and otherwise, relating to state systems of normal schools. A statistical summary and the replies to the circular letter on normal-school systems are printed in full in the appendix, in order that all facts upon which conclusions are based may be accessible to readers. The two leading questions discussed are (1) A central school or number of schools in the same state; (2) If a number of schools, should they be controlled by one board or by separate boards.

- 72 **Skiff, F. J. V.** The uses of educational museums. (In N. E. A. Proc. p. 80-85.)

A presentation of present conditions in regard to educational measures, of what they do, and what they aim to do.

- 73 **Thorndike, E. L.** The quantitative study of education. (Forum, Jan.-Mar. 36: 443-48.)

The difficulty and need shown for an exact objective measurement of the results of educational endeavor to indicate the gains from certain studies.

- 73 **U. S.—Philippine islands, Education bureau.** Philippine normal school, Manila, P. I. Catalogue for 1904-5 and prospectus for 1905-6. 67 p. O. Manila, Bureau of public printing. (Bulletin 21.)

Outlines requirements for admission and courses offered. A duplicate in Spanish.

- 75 **Violette, E. M.** History of the First district state normal school, Kirksville, Missouri. 280 p. O. Kirksville, Mo. Journal printing company, \$1.50.

A direct and interesting presentation of the history of the First district state

normal school, into which is woven much concerning the Normal school system of the state, its origin and development. The author, a member of the faculty since 1900, based his work upon all documents available at this date. Much concerning the present activities of the school and its members, as well as statements regarding its growth, is given.

370.9 *History of education, General*

See also geographical subdivisions under 378 and 379.5.

- 76 **Adamson, J. W.** *Pioneers of modern education, 1600-1700.* 285 p. D. Macmillan, \$1.50.

The author "gives a lucid and sympathetic account of the thoughts and deeds of the 'pioneers' of the seventeenth century, and we must admit that to the efficiency of many of their schemes, this century has not yet attained. Great skill is shown in so displaying the thoughts and suggestions of the great educational philosophers of the century that readers outside the walls of schools and class-rooms will be interested in them." *Athenæum*. The volume is pre-eminently for the student of the history of education, not for the teacher.

Some of the subjects included are: The new philosophy.—Brinsley's "*Ludus Literarius*."—Ratke.—Bacon and Comenius.—"*Didactica Magna*" and "*Janua*."—Hartlib and Milton.—Dury's "*Reformed School*."—Horle.—Courtly Academies.—Elementary education.—De la Salle and Christian Brothers.—Franke and the Pietists.—Classicists and Moderns.

- 77 **Boardman, J. H.** *The educational ideas of Froebel and Pestalozzi.* O. Simpkin, 1s. 6p. net. (Normal tutorial ser.)

- 78 **Consular reports on education.** (In U. S.—Education, Comm'r of. Report for 1903. 1:623-67.)

On various phases of the subject and from various parts of the world. Received from United States consuls.

- 79 **Dodd, C. I.** *Some old school-books.* (National rev. Aug. 45: 1006-14.)

- 80 **MacDonald, D. B.** *The moral education of the young among Muslims.* (Intern. jour. of ethics, Apr. 15: 286-304.)

A critical exposition of the development, aim and methods in Muslim educational ideas. A lecture given under the auspices of the Philadelphia society for ethical culture.

- 81 **Monroe, Paul.** *Text-book in the history of education.* 772 p. O. Macmillan, \$1.90.

Probably the best book on this subject for class-room and general reading. It is longer, but more concentrated, and with more thoro and authoritative discussion of the material used than can be found elsewhere. Its good points are "a broad, yet sane and definite conception of the subject, and a rich body of material, in general well chosen." *Dial*. Its faults are an occasional lack of proportion and apparent haste in completing the work, which has resulted in minor inaccuracies of statement and of style that might have been avoided by more care in revising and proofreading. It is the author's plan to supplement this text-book with a series of source books more fully illustrating the development of educational thought and practices. The first of these for the Greek and Roman period was published in 1901 and noted in this bibliography in *Educ. Rev.*, June, 1902, p. 68.

- 82 **Painter, F. V. N.**, comp. Great pedagogical essays, Plato to Spencer. D. American book co., \$1.25.

Consists of brief selections from the most noted educational treatises of all ages. Seven selections represent the classical age, four the middle ages, six the renaissance and reformation period, and nine the more recent centuries. The chief drawback is that no unified basis of selection was taken and that the educational ideal of each period is not necessarily presented here. However, it is a good survey in brief compass, and the introductory biographical sketches are helpful (Condensed from the *Bookman*.)

A collection of source material intended to introduce the student to the chief documents of educational history. There are no annotations by the editor except the brief biographical sketches. It should be a useful volume with students in History of education.

- 83 **Rogers, H. J.** Educational progress of the year. (*Educ. rev.* Sept. 30: 109-58.)

Also in *N. E. A. Proc.* p. 286-320. A summary of all important and significant tendencies and events not only in the United States but thruout the world. The presentation is topical, admirably clear and comprehensive.

- 84 **Reinsch, P. S.** Education and general social improvement. (In his *Colonial administration*. Macmillan, \$1.25. p. 38-80.)

A comparative study of educational methods and the needs fronting colonial governments, and a special consideration of conditions in Africa. A long bibliography appended to the chapter.

- 85 **Spalding, J. L.** The development of educational ideas in the nineteenth century. (In his *Religion and art, and other essays*. McClurg, \$1. p. 68-III.)

Delivered before the International congress of arts and sciences, St. Louis, Mo., Sept. 21, 1904. Gives a comprehensive view of the tendencies of the past century, finding the cause of the development shown in the world's realization of the demands of Democracy.

- 86 **White, Jessie.** The educational ideas of Froebel. 168 p. D. Clive, 1s.

A thoroly sound and good account of Froebel, his ideas and his works. The author has been successful in bringing out clearly the "golden truths" of his philosophy, so that the work will be useful to kindergarten teachers and students.

370.9 *History, Alphabetically by countries*

Africa

- 87 **The systems of education in Africa.** (In *Great Britain—Education, Board of. Special reports on educational subjects.* v. 13, p. 1-198, 297-345.)

Education in each department or colony in Africa is treated separately by some one, generally the Inspector of Schools, who is competent to do his subject justice. Each article follows a general line of development, giving: 1st, an historical sketch of the educational system; 2d, the system now in vogue, subdivided into primary education—which is treated in detail as to administration, standards to be maintained, teachers, scholars, building, salaries, &c.—secondary education, and any denominational or missionary schools carried on within its borders. Appendices give the Education Act and Rules, also various tables of statistics. The appendices to the entire volume, p. 297-345, present special articles which have great

value, and which deal with the work of missions along this line, and with the education of natives.

CONTENTS: Gold Coast Colony, by F. Wright, p. 1-30.—Lagos, by Henry Carr, p. 31-72.—Sierra Leone, by M. J. Marke, p. 73-112.—Southern Nigeria, by C. J. M. Gordon, p. 113-22.—Basutoland, by H. C. Sloley, p. 123-44.—Southern Rhodesia, 1890-1901; its origin and development, by H. E. D. Hammond, p. 145-80.—Uganda: Société des Missionnaires d'Afrique, by Henri Streicher; The Church missionary society, by R. H. Walker; The Nsambya Mission, by Bishop Hanlan, p. 183-98.—The educational work of the Basel Mission on the Gold Coast, by Rev. W. J. Rottmann, p. 297-307.—Industrial training for natives on the Congo, by Rev. George Grenfell, p. 309-11.—Livingstonia, by Rev. J. Fairley, p. 313-22.—Blantyre Mission, British Central Africa, p. 323-35.—Education of natives in South Africa, by Sir M. J. Clarke, p. 333-35.—On native education—South Africa, by Rev. James Stewart, p. 337-42.—The work of the Moravian missionaries in South Africa and North Queensland, p. 343-45.

Alaska

- 88 **Jackson, Sheldon.** Report on education in Alaska. (In U. S.—Education, Comm'r of. Report for 1903. 2:2333-64.)

Statistical report; also a description of what is done in various places, the number of pupils, &c.

Asia

- 89 **The educational systems in Asia.** (In Great Britain—Education, Board of. Special reports on educational subjects. v. 14, p. 1-169.)

Education in Asia is complicated by the diversity of races. The three articles, each for its own section of country, present a brief view of the educational system of the past and describe that now in force. The schools for different races are described in detail and, where possible, statistics are given. Each article gives, in its Appendices, the Code of Regulations, and any other laws in force in the dependency; schedules of studies required, and other items of interest. The entire work is trustworthy and valuable as giving an authentic view of education in the East under British direction.

CONTENTS: Federated Malay states, p. 1-60.—Hong Kong, by E. A. Irving, p. 61-132.—Straits Settlements, by J. B. Elcum, p. 133-69.

R. J. Wilkinson has, in v. 8 of the Special reports on educational subjects, a paper on the Education of Asiatics.

British Honduras

- 90 **Dillon, A. B.** The system of education in British Honduras. (In Great Britain—Education, Board of. Special reports on educational subjects. v. 12, p. 135-73.)

The author, the Inspector of Schools in British Honduras, gives a brief account of the early history of education there, and then presents the system now in vogue, laying special stress upon the various features and conditions of primary education. Appendices give the Education ordinance, 1892, the Education Rules, 1894-1902, schedules of Standard statistics showing educational progress from 1850, &c.

Canada

- 91 **Allison, W. T.** Ontario school life sixty years ago. (Canadian mag. Aug. 25: 345-51.)

Pictures life in the first school opened in West Gwillimbury, as gleaned from its old register.

- 92 **Hughes, J. L.** The separate school agitation in Canada. (*Educ. May.* 25: 525-30.)

A frank presentation of the situation in Canada in regard to the plan of having separate schools for Catholics and Protestants, and of the arguments as to the central government's right to interfere in educational matters.

- 93 **Stockley, W. F. P.** The Canadian Northwest school question. (*Amer. Cath. quar. rev.* July. 30: 472-94.)

A historical and critical presentation of conditions which have created the present state of affairs; Catholics and their school rights, sectarian animosity, the rights of minorities, and the question of provincial rights against the central government.

Ceylon

- 94 **Burrows, S. M.** Industrial schools and school gardens in Ceylon. (In *Great Britain—Education, Board of. Special reports on educational subjects.* v. 14, p. 341-62.)

A presentation of the conditions in the Island, of what has been tried, and of what problems now face educators, with suggestions for meeting them.

Chile

- 95 **Noel, J. V.** Report on the Chilean educational congress and exhibit, 1902-3. (In *U. S.—Education, Comm'r of. Report for 1903.* 2: 1243-72.)

Largely a report on the congress but includes much about education in general in Chile.

Cyprus

- 96 **Newham, Rev. F. D.** The system of education in Cyprus. (In *Great Britain—Education, Board of. Special reports on educational subjects.* v. 12, p. 407-44.)

A presentation of the educational system in the island in 1879 and of its growth since. The present system is discussed at length as to the primary schools and their administration by Christians and by Moslems; also the island's secondary, technical and private schools. Appendices give the Education Law, 1895, and 1897, also statistical tables of value.

Falkland Islands

- 97 **Brandon, Rev. L. E.** The system of education in the Falkland Islands. (In *Great Britain—Education, Board of. Special reports on educational subjects.* v. 14, p. 197-204.)

A brief view of educational conditions in the Islands and a reprint of the School Attendance Ordinance, 1895.

Fiji

- 98 **Allardyce, W. L.** The system of education in Fiji. (In *Great Britain—Education, Board of. Special reports on educational subjects.* 14: 171-95.)

A brief view of public education in Fiji, giving statistics where required. Native education, chiefly carried on by Catholics and Methodists, receives some attention. The appendices give the Public Education Ordinance, 1890, 1891, and the Regulations under it; also the regulations affecting public, native and industrial education.

Finland

- 99 **Reinsch, P. S.** Russia, and Finnish education. (World to-day, Aug. 9: 852-54.)
Russia's efforts to stamp out all independent intellectual life set forth.

France

- 100 **Edwards, M. B. Betham.** Home life in France. 310 p. O. McClurg, \$2.50.

Presents life in France: education also included and described in its various aspects. For special places and kinds, see index under Education.

Gibraltar

- 101 **Cornwall, G. F.** The system of education in Gibraltar. (In Great Britain—Education, Board of. Special reports on educational subjects. v. 12, p. 445-64.)

A statement concerning education before English occupation and the conditions existing there as to language, &c.; then, a presentation of the school system divided according to the religious denominations having schools in Gibraltar, the public, private and army schools. Appendices give the Education Code and Rules, and statements regarding schools receiving government grants and the teaching staff.

Great Britain

- 102 **Education.** (In Hazell's Annual for 1905. Hazell, Watson and Viney, p. 140-53.)

A comprehensive, cyclopædic account of educational conditions, facts, kinds of education, &c., with special reference to the United Kingdom. Topical arrangement.

- 103 **Great Britain—Education, Board of.** Educational systems of the chief crown colonies and possessions of the British empire, including reports on the training of native races. (Special reports on educational subjects. v. 12-14.)

The three volumes are the result of official investigation and of inquiries under certain heads, addressed to the authorities of twenty-five colonies and dependencies, from twenty-one of whom replies were received. The reports include about forty-three separate articles, written from thorough knowledge and after adequate investigation of the educational systems and laws of the locality described. The statements are reinforced by statistics. The result is an important contribution,—and a significant one,—to educational literature, for the whole represents a serious effort to present conditions as they are and to show how they came to be. The official reports are supplemented by papers dealing with the efforts of missionary bodies to provide educational facilities for the native races among whom they are working. The various articles, or the countries, are entered separately in this bibliography, under the proper headings.

Greece

- 104 **Sandys, J. E.** History of [Greek] scholarship. (In Whibley, Leonard. Companion to Greek studies. Macmillan, \$6. p. 632-51.)
From 300 B. C. to the present day.
- 105 **Wilkins, A. S.** Education. (In Whibley, Leonard. Companion to Greek studies. Macmillan, \$6. p. 503-11.)

A good brief account of the formal processes for training Greek boys and girls in antiquity.

Hawaii

- 106 **Education in the Philippines, Hawaii and Cuba.** (In U. S.—Education, Comm'r of. Report for 1903. 2:2385-95.)
Statistical and descriptive.

India

- 107 **Gerhard, E. S.** Education in India: the evils of class distinction. (Educ. rev. Apr. 29:401-10.)
An explanation of educational conditions as affected by caste.
- 108 **Industrial and technical education in India.** (Great Britain—Education, Board of. In special reports on educational subjects. v. 14, p. 327-40.)
CONTENTS: 1. Work of the American board of commissioners for foreign missions in regard to industrial and agricultural education in India.
2. Memorandum on technical education in Southern India, by A. Margoeschis.
A brief presentation of the conditions existing in regard to industrial and technical training in India, and a brief statement of the work actually accomplished in some places.

Italy

- 109 **Sandys, J. E.** Harvard lectures on the revival of learning. 212 p. D. Macmillan, \$1.50. —
CONTENTS: Petrarch and Boccaccio; The age of discoveries; Theory and practice of education: The academies of Florence, Venice, Naples and Rome: The homes of humanism: History of Ciceronianism; The study of Greek.
The period covered is 1300-1600 and immediately follows the time treated by the same writer, but more in detail, in his History of classical scholarship.

Japan

- 110 **Hioki, Eki.** Conditions affecting the education of children in Japan. (In National congress of mothers, 9th. Washington, D. C., 1905. Report. p. 136-47.)
The author, a Japanese, speaks from his exact knowledge of conditions in his country. These conditions may be briefly summarized as the influence of the mothers and of the feudal system, inculcating honor and self-control. He shows how these influences permeate and mold a child's life and character, both at home and in school.

Mauritius

- 111 **System of education in Mauritius.** (In Great Britain—Education, Board of. Special reports of educational subjects. v. 13, p. 199-264.)
An historical sketch of the origin and form of development of the educational system; a detailed description of primary education and its different phases; introducing the various Codes and their results; also a description of technical education and the Government Reformatory. Appendices give the Education Ordinance, 1899, the Code of 1902, and the Rules and regulations of the Royal College of Mauritius, 1901.

New Guinea

- 112 **Education in British New Guinea.** (In Great Britain—Education, Board of. Special reports on educational subjects. v. 14, p. 321-25.)
A presentation of the educational system, its difficulties and its results, by the Bishop of New Guinea.

Philippines

- 113 **Barrows, D. P.** Report of the General superintendent of education, Sept. 15, 1903-Sept. 15, 1904. (In U. S.—Philippine commission. Fifth annual report; part 3. p. 847-918.)

A general survey of educational conditions as to expenditures, the different grades of instruction, the Philippine and American teachers, Civil service, courses of study, the various schools on the islands, &c.

- 114 **Education in the Philippines.** (In U. S.—Census of the Philippine Islands. U. S. Bureau of the Census, Wash., D. C. v. 3, p. 575-694)

CONTENTS: I. Under Spanish rule, by Tomás G. del Rosario. A complete view of education, treating the school regulations, the kind and quality of primary, secondary, higher, normal and private education, schools for girls, the opportunities offered at the University of Santo Tomás, statistics on various subjects and the degree of success obtained.

II. Under the Americans, by P. F. Jernegan. A comprehensive view of present conditions and various aspects of education. Treats of the system prior to American occupation briefly; then of schools under military administration, under the Philippine commission; then the purposes and interesting particulars of the educational system.

III. Schools. Gives summary of statistics regarding education in the Philippines, the classification of schools, of school buildings, teachers, pupils, sources of revenue and expenditures.

- 114a **French, Willard.** The public-school system in the Philippines. (No. American rev. Apr. 180: 546-56.)

Presents life among the Filipinos as a background against which the embryo educational system rests.

- 114b **Le Roy, J. A.** Education and public opinion. (In his Philippine life in town and country. Putnam, \$1.20 net. p. 202-45.)

After a brief historical sketch a clear account is given of what the U. S. government has done, has tried to do and hopes to do.

- 114c ——— Education in the Philippines. (Outlook. Aug. 80: 867-71.)

A summary of Dr. D. P. Barrow's article in the "Philippine teacher," showing the number of children taught, the teaching force and funds at hand; also what the educators hope to accomplish there.

- 115 **Sutherland, W. A.** The Filipino students. (In Lake Mohonk conference of friends of the Indian. Proceedings of the twenty-third annual meeting, 1905. p. 108-13.)

A statement of what is being done for him, and especially when sent to the United States.

- 116 ——— Report of the superintendent of Filipino students in the United States, covering the Filipino student movement, from its inception to June 30, 1904. (In U. S. Philippine commission. Fifth annual report; part 3. p. 919-30.)

Describes the sending of students to the United States to be educated.

- 117 **Taft, W. H.** American education in the Philippines; a contrast to English and Dutch colonial policies. (*Educ. rev. Mar.* 29: 264-85.)
 A statement of conditions as they exist in the Philippines, a criticism of the native character and a comparison of it with that of the natives under English and Dutch rule, with reasons for the attitude our government has taken in educational matters; also a statement of what our system has already done.
- 118 **U. S.—Philippine commission.** Third annual report of the secretary of public instruction for the year ending Oct. 15, 1904. (In its Fifth annual report, part 3, Government printing office, Wash. p. 811-971.)
 May be obtained thru the War department at Washington.

Rome

- 119 **Wilkins, A. S.** Roman education. 100 p. D. Macmillan, 60 c.
 A scholarly but readable little book of six chapters, and the best, perhaps, on this subject. It gives a clear, accurate and trustworthy account of practically all that is known about Roman education, and is based upon what scanty information there is to be gained from Roman writers. His frequent quotations from the original sources, without giving a translation, do not mar the interest of the work. A list of the best modern authorities for farther research is prefixed.

Roumania

- 120 **Reform of education in Roumania.** (In U. S.—Education, Comm'r of. Report for 1903. 2: 2467-71.)
 Speaks of the kinds of education offered, the number of children, courses, and organizations.

St. Helena

- 121 **Porter, Rev. Alfred.** The system of education in St. Helena. (In Great Britain—Education, Board of. Special reports on educational subjects. v. 12, p. 401-05.)
 A brief account of the educational conditions on the island, and of the subjects taught there, by its Inspector of Government Schools.

Seychelles

- 122 **Chitty, L. O.** The system of education in Seychelles. (In Great Britain—Education, Board of. Special reports on educational subjects. v. 13, p. 265-96.)
 A description of education on the Island quoting statistics upon various points. Appendices give the Education Ordinance, 1900; Regulations for Grant-in-Aid schools, 1901; schedules of studies, &c.

Transvaal

- 123 **MacCullah, A. A.** Concerning education in the Transvaal. (*Westminster rev. Feb.* 163: 188-97, *Mar.* 163: 320-29.)
 1. Under the republican government.
 2. Under crown colony government.

- 124 **Transvaal and Orange River colony.** Report of the director of education for the period November, 1900, to February, 1904. 208 p. O. Longmans, 6s.

The demand for this notable report necessitated a reprint, as the original edition proved too limited.

A description is given of the development of the educational system after the two republics were annexed to the British empire, and is arranged by years. Twenty-six appendices, p. 57-206, give addresses, reports, regulations, and laws, tabulated statistics, and descriptions of various special phases of education in the Transvaal and Orange River colonies.

Turkey

- 125 **Patrick, M. M.** Women in Turkey. (Forum, July-Sept. 37: 115-27.)

A description of life in general in Turkey but with special reference to the education and to the schools maintained for girls, also showing what women may do intellectually.

United States

See also 378, subhead United States; 379.15; 379.5 subhead United States.

- 126 **Conway, James.** Catholic education in the United States. (Educ. rev. Feb. 29: 123-40.)

Paper prepared for the Catholic Congress at Melbourne, Australia. Reprinted from the Fordham Monthly for October and November, 1904.

An account of the history and conditions of American education from a strictly Roman Catholic point of view; a presentation of Catholic education in a very favorable light; also, objections to the present non-sectarian plan of school courses, with a plea for the education of Catholics by Catholics and in Catholic schools.

- 127 **Draper, A. S.** The nation's educational purpose. (In N. E. A. Proc. p. 89-102.)

A survey of the American history and spirit out of which grew the nation's purpose of a free education for all, the last of which the author considers on its various sides.

- 128 **Educational progress of the year.** (Outlook, July. 80: 704-8.)

The challenge and defense of the new educational "frills"; the economic status of the teacher; the college curriculum; a president installed in the University of Virginia.

- 128a **Hood, E. L.** The New West education commission 1880-1893. 151 p. O. The H. and W. B. Drew co., \$1.

CONTENTS:—Preface.—Organization of the commission.—Mormonism.—Congregational missions and schools.—The academies of Utah.—The rural schools of Utah.—Trinidad academy.—New Mexico and Arizona.—The academies of New Mexico.—The rural schools of New Mexico and Arizona.—The Mexican training school.—Charles Robinson Bliss.—Conclusion.—Schools of the new West.—Teachers of the new West, with length of service.—Summary.

- 128b **Mayo, A. D.** The final establishment of the American common school system in West Virginia, Maryland, Virginia and Delaware, 1863-1900. (In U. S.—Education, Comm'r of. Report for 1903. 1: 391-462.)

An historical sketch.

- 129 **Rose, Wyckliffe.** The educational movement in the South. (In U. S.—Education, Comm'r of. Report for 1903. 1: 359-90.)

An account of the origin, development and present work of the conference for education in the South, including in this term the whole educational movement.

Massachusetts

- 130 **Slafter, Carlos.** A record of education: the schools and teachers of Dedham, Mass., 1644-1904. Dedham transcript press. Privately printed.

New York

- 131 **Gabriels, Henry.** Historical sketch of St. Joseph's provincial seminary, Troy, N. Y. 188 p. Q. The United States Catholic historical society, \$2.50. (United States Catholic historical soc. Monograph ser. 3.)

CONTENTS: Introduction.—1. Life of Bishop Henry Gabriels.—2. Early New York Seminaries, by C. G. Herbermann. Epilogue, by T. F. Myhan.

Pennsylvania

- 132 **Riddle, William.** One hundred and fifty years of school history in Lancaster, Pennsylvania. 442 p. O. Lancaster, Pa., The author, \$2.

For more than half a century, the author has been identified with the school system of Lancaster, as pupil, teacher and director. He tells of the growth of the Common school system, the development of the curriculum, the progress made in hygiene and the improvement in architecture. He has linked the earlier history of education in Lancaster with that founded by the state. The book shows historical research.

West Virginia

- 133 **West Virginia.** Dep't of free schools. History of education in West Virginia. Prepared under the direction of the state superintendent of free schools. 319 p. O. Charleston, The Tribune printing company, 1904.

Venezuela

- 134 **Williams, A. S.** A Venezuelan text-book. (Educ. rev. Dec. 30: 518-29.)

A description of the Spanish text-book by Manuel Antonio Carreño. "Manual of Urbanity and of good manners for the use of the youth of both sexes," and its effect upon school-children.

West Indies

- 135 **Education in the West Indies.** (In Great Britain—Education, Board of. Special reports on educational subjects. v. 12, p. 1-133, 175-399, 465-74.)

The presentation of the educational systems of each colony follows practically the same general line of arrangement and gives practically the same details where conditions allow. A brief historical sketch of the educational system is followed by a presentation of the system now in vogue. Primary education is treated fully as to administration, number of schools, scholars, teachers, salaries, subjects taught, &c. Secondary education also receives attention, and any other form, as agricultural, tech-

nical, church, university, reformatory, &c., which the colony may possess. Appendices give for each colony its Education Acts, Code of Rules, schedule of standards to be maintained, statistics of attendance, &c., and any other statistics which the colony may compile. In each case, the writer is, or has been, Inspector of Schools, and so speaks from a thoro knowledge of his subject.

CONTENTS: The Bahamas, by G. Cole, p. 1-40.—Barbados, by J. E. Reece, p. 41-97.—Bermuda, by George Simpson, p. 99-133.—Trinidad and Tobago, by Gervase Bushe, p. 173-256.—Windward Islands; Grenada, by John Harbin, p. 257-313.—St. Lucia, by F. E. Bundy, p. 315-56.—St. Vincent, by F. W. Griffith, p. 357-99.—Education in Jamaica in its relation to skilled handicraft and agricultural work, by E. Jamaica. (?) p. 465-74.

370.92 Biography

The N. E. A. necrology list of members who have died during each year is printed in each volume of *Proceedings*. *Who's who in America* is the best current directory of living educators. *Who's who* and the *Schoolmaster's year book* for English educators.

- 136 **Eaton, John.** Sketches of educational benefactors and lives devoted to education. (In U. S.—Education, Comm'r of. Report for 1903. 2:1303-43.)

Includes about fifty names of 19th century Americans both living and dead.

- 137 **Finley, J. H.** Two American educators. (Outlook, July. 80:745-50.)

An estimate of the services of Presidents Angell and Harper to the cause of education.

- 138 **Public school leaders.** (Outlook, July. 80:733-39.)

Short biographical sketches of E. G. Cooley, N. C. Dougherty, A. S. Draper, J. M. Greenwood, W. T. Harris, C. M. Jordan, E. O. Lyte, C. D. McIver, W. H. Maxwell, Pres. Seerley, F. L. Soldan, and F. W. Atkinson.

- 139 **Armstrong, Prof. H. E. Hayward, F. H.** Some recent educational reformers: Prof. H. E. Armstrong. (Jour. of educ. May. 36:363-67.)

A statement, discussion and criticism of Prof. Armstrong's pedagogical position and theories.

- 140 **Curry, Jabez Lamar Monroe. J. L. M. Curry** and his services to education in the South. (In U. S.—Education, Comm'r of. Report for 1903. 1:521-52.)

CONTENTS: Proceedings of the Trustees of the Peabody fund.

Eulogium, by E. A. Alderman.

Services of Doctor Curry in connection with the Peabody fund, by A. D. Mayo.

Education in the Southern States. An address by Hon. J. L. M. Curry.

- 141 **Harper, William Rainey. Linn, J. W.** President Harper of the University of Chicago. (World's work, Dec. 11:7009-13.)

His life, especially as it touched the university and left its impress upon its educational and material development. See also no. 137.

- 142 **Obelin, Jean Frédéric. Holman, H.** Obelin and his educational work. Charles & Dible, 1s.

An excellent biography of a man who, with small means, founded a complete system of social and moral instruction which raised people almost from barbarism to civilization. He is often referred to as the real founder of infant schools.

- 143 *Pierce, John D. Hoyt, C. O., and Ford, R. C.* John D. Pierce, founder of the Michigan school system. Scharf tag, label and box co., Ypsilanti, Mich. \$1.
Bibliography. p. 153-55.
- 144 *Sturm, Johannes. Field, W. G.* How Johannes Sturm worked in life and after it. (Jour. of educ. Jan. 36: 23-25.)
A biography of the founder of the Strassburg Gymnasium is given. An outline of his pedagogical doctrines, a criticism of them and a description of the effects of his work is also included.
- 145 *Tompkins, Arnold. Chicago Normal school faculty.* Arnold Tompkins; died August 12, 1905. 31 p. O. Faculty of the Chicago normal school. n. p.
A memoir and appreciation of the life and work of Principal Tompkins.
- 146 *White, Andrew Dickson. White, A. D.* Autobiography. 2v. O. The Century co., \$7.50 net.

The autobiography of an American gentleman and scholar who has been of service to his country educationally, diplomatically, morally and personally. It is a very comprehensive work, with little of introspection, but a wealth of reminiscences and is of permanent value to the culture literature of our country. Perhaps there is a little too great a tendency to diffuseness and too frank statement of opinions regarding people now living. Part 1 treats of his boyhood;—2, of his political life;—3, of his life as a university professor;—4, as a university president;—5, life in the diplomatic service where he had varied experiences in many countries;—6, of sundry journeys and experiences;—7, of miscellaneous recollections;—8, his religious development, in which, perhaps, we get the only touch of the confessional.

371 TEACHERS, METHODS, DISCIPLINE

371.I Teachers

- 147 *Book, W. F.* The high school teacher from the pupil's point of view. (Ped. sem. Sept. 12: 239-88)
As development of children is the essential thing in education, the present study is an attempt to approach one pedagogical problem from the psychological side—to study the teacher from the pupil's point of view. The author aims to find out from the students themselves what their favorite teachers are like, which of their qualifications are best liked, and what their most helpful teachers actually do. How far students are right or wrong is not considered, the idea being only to get as full and accurate a description as is possible of teachers who are liked and found helpful and to present the pupil's honest reactions, whatever they may be. The work is arranged topically and with frequent quotations from the students' statements. It also contains a bibliography.
- 148 *Cleveland, A. A.* The predominance of female teachers. (Ped. sem. Sept. 12: 289-303.)
Statistics of the percent of men and women teachers given and the question, "Should the education of both sexes be under the predominating influence of women" considered only in its educational aspects, while the pedagogical effects of this overwhelming predominance of feminine influence are traced out as far as possible from the limited data available.
- 149 *Hall, G. S.* Certain degenerative tendencies among teachers. (Ped. sem. Dec. 12: 454-63.)
Address before the Social Science Association, April, 1905.
A study of what their mental food is and what they do.

- 150 **Marker, G. E.** How to test the quality of teaching. (Educ. Apr. 25: 451-59.)
Discusses the questions: What are some of the tests of teaching power? How may we test the quality of the recitation? How may we test the quality of the assignment?
- 151 **National society for the scientific study of education.** The education and training of secondary teachers. (In its Fourth year-book; part 1. 117 p. O. Univ. of Chic. press, 75c.)
CONTENTS: The Genesis of American secondary schools in their relation to the life of the people, by E. C. Elliott.—What constitutes the ideal secondary teacher, by R. P. Halleck, J. S. Brown, S. D. Brooks, A. F. Nightingale and J. F. Brown.—The present status and personnel of the secondary teaching force in the U. S., by E. G. Dexter.—The present provision for the education and training of secondary teachers in the U. S., by M. J. Holmes.—Relative advantages and limitations of universities and normal schools in preparing secondary teachers, by L. J. Lord and others.—Bibliography, minutes.
- 152 **Palmer, W. T.** Tenure of office. (In N. Y. (state)—Associated academic principals. Proceedings of the twenty-fifth annual conference, . . . 1904. p. 54-58.)
A discussion of why teachers stop teaching, concluding that reform in regard to their manner of engagement is necessary. See also no. 169.
- 153 **Outlines of methods of appointing and advancing teachers in various cities.** (In N. E. A. Proc. p. 244-50.)
The methods in Baltimore, Denver, Omaha, Chicago, Kansas City, Lowell, Newark and New York briefly described.
- 154 **Thompson, E. L.** What the community has a right to expect from the teacher. 27 p. T. E. L. Thompson, Steward, Ill., 6c.
Read before the Teachers' institute at Steward, Ill. First published in the Daily Star.
- 155 **U. S.—Commerce and labor, Dep't of. Census statistics of teachers.** 20 p. Q. Government printing office, n. p. (Bureau of the census. Bulletin 23.)
Summary of results gained from the census, general and special tables, and a discussion of various items regarding the teaching profession; as, comparison with foreign countries, geographic divisions, sex, age, race, &c.

371.12 *Training of teachers*

See also no. 151 and section 370.7, normal schools.

- 156 **Bachman, F. P.** Certification of teachers prepared in state institutions. (Educ. Sept. 26: 40-46.)
The attitude of various states and territories towards the certification of teachers prepared in state-controlled and state-supported schools described.
- 157 **The education and training of secondary teachers.** (In National society for the scientific study of education. Fourth year-book; part 1. 117 p.)
CONTENTS: Genesis of American secondary schools in their relation to the life of the people.—What constitutes the ideal secondary teacher?—The present status and personnel of the secondary teaching force in the United States.—The present provision for the education and training of secondary teachers in the United States.—Relative advantages and limitations of universities and normal schools in preparing teachers. Bibliography.
- 158 **Hill, Mabel.** Professional literature. (Educ. June. 25: 612-18).
A statement of a teacher's attitude towards his professional literature and a

plea for its more extensive reading. Editorially commented upon and conditions criticised, on page 627-28.

- 159 **Larzelere, C. S.** The training of teachers in Michigan. (Educ. Jan. 25: 292-302.)

A description of conditions and of what is being done to better them; also, an outline of requirements for admission to different normal courses as prescribed by Sup't of Public Instruction Fall.

- 160 **Lyttelton, E.** Ought public schoolmasters to be taught to teach? (Nineteenth cent. June. 57: 919-27.)

Conditions in England and need of training for secondary teachers presented.

- 161 **Taylor, H. L.** Professional education in the United States. Teaching. 133-393 p. O. Alb., N. Y. state educ. dep't. 35c. (N. Y. (state).—Education dep't—Higher education Bulletin 24.)

Outlines the entire organization and public administration of education in each American state, with brief description by institutions, of facilities for training teachers, and legal requirements and provisions for certification. Well indexed and convenient. Is fuller on normal schools than on the colleges, and has an interesting chart illustrating the American system of education as exemplified in New York.

- 162 **Thorndike, E. L.** What instruction in educational psychology should be given in a professional course for teachers. (Teachers coll. record Jan. 6: 20-41.)

Practical suggestions and an outline of a year's course in general and educational psychology.

Submitted to the Society of college teachers of education, Milwaukee meeting, Feb. 28-Mar. 2, 1905.

371.16 *Teachers' salaries*

- 163 **Ayres, Samuel.** The state and the teacher.

"These interesting articles by the Principal of Public school 32, New York City, urge the duty of the state to provide retirement funds for its teachers. An able presentation of the subject." Ped. Sem.

The compilers have been unable to discover where, or in what form, these articles were published.

- 164 **Foulk, C. W. and Earhart, R. F.** State university salaries. (Pop. sci. mo. Sept. 67: 423-34.)

A comparative study of salaries paid in eight of the state universities of the Middle West, which are studied as typical because of their high standard, income and rapid growth. The total income of the universities from 1893-1905, the general averages of salaries for all universities for professors, for associate professors and for assistant professors, during these years are represented graphically on separate tables.

- 165 **Greenwood, J. M.** An experience in helping teachers professionally. (Educ. rev. Dec. 30: 464-73.)

A brief account of what Kansas City has done in adjusting a general increase in grade teachers' salaries, and the results thus far accomplished.

- 166 **Harper, W. B.** Are school-teachers underpaid? (In his *Trend in higher education*. University of Chic. press, \$1.50. p. 186-94.)

After a brief statement of salaries paid in typical cities, the author gives five arguments why they are thoroughly inadequate, any one of which arguments, tho it stood alone, he claims, would be sufficiently strong to prove his point.

- 167 **Harris, W. T.** The future of teachers' salaries. (In N. E. A. Proc. p. 67-78.)
A statistical view of teachers' salaries, a comparison with the remuneration received from other occupations, and a hopeful attitude towards what the future holds.
- 168 **M, G. H.** What should college professors be paid? (Atlantic mo. May. 95: 647-50.)
An itemized account of actual expenses for nine years of a teacher in one of the larger American universities.
- 169 **National educational association—Committee on salaries, tenure and pensions of public school teachers in the United States.** Report to the National council of education. 466 p. O. Irwin Shepard, Winona, Minn. 50c.
A notable report by a committee which, with Carroll D. Wright as chairman, was appointed in 1903 and issued its preliminary report in 1904 (see this Bibliography, 1904, no. 120). American teachers' salaries are summarized and tabulated by states, cities of varying sizes, sex and grade of teacher. The report is chiefly an important presentation of data on the topics of salary and tenure of office. The report is very meager as to pensions, merely noting the slender beginnings of the practice in this country. The data are merely submitted with only explanatory comment; no attempt at interpretation being undertaken.
- 170 **Ricker, D. S.** The school teacher unionized. Educ. rev. Nov. 30: 344-74.)
A presentation of the aims, needs and work of the National Federation of Teachers, and of the Chicago Teachers' Federation.
- 171 ——— Unionizing the school-teachers. (World to-day, Apr. 8: 394-402.)
An account of its origin, growth, methods and aims. Said to be impartial and trustworthy.
- 172 **Sommer, F. H.** Shall the state regulate teachers' salaries? (In N. E. A. Proc. p. 831-36.)
A consideration of present conditions influencing remuneration.

371.17 *Pensions for teachers*

See also no. 169.

- 173 **Existing pension systems for college professors.** (Nation, June. 80: 473-74.)
A statement of what different Universities now provide along this line.
- 174 **Jastrow, Joseph.** Endowment of learning. (Dial, May. 38: 343-46.)
A sane and critical discussion of Mr. Carnegie's pension fund and endowment of the Carnegie Institution.
- 175 **Thwing, C. F.** A pension fund for college professors. No. Amer. rev. Nov. 181: 722-30.)
The system of pensions now in vogue in some colleges considered in relation to the Carnegie Foundation and its aims.

371.2 *School organization; The superintendent*

See also section 379.15

- 176 **Bray, S. E.** School organization. 222 p. O. Clive, 2s.
"A well-written book dealing with elementary schools." Schoolmasters'

Year book. The author is inspector of schools to the London Council. It is frankly empirical and rarely attempts to deduce rules from first principles, but otherwise is a good guide on organization, and also on such matters as discipline, class teaching, school furniture, &c.

- 177 **Roote, C. B.** The superintendent and the high school. (School rev. Mar. 13: 232-42.)

Read before the Headmasters' club of Western Massachusetts.

A discussion of the difficulty and need for a proper balance of power between the two.

371.23 *Vacation schools*

- 178 **Buck, Winifred.** Work and play in the public schools. (Outlook, July. 80: 725-32.)

Various ways school houses and play grounds are utilized for educating and training children in New York city.

- 179 **Curtis, H. S.** Vacation schools, play grounds and settlements. In U. S.—Education, Comm'r of. Report for 1903. 1: 1-38.)

Each topic is treated separately. Its growth, aim, what is done and what needs yet to be done, and the results adequately treated. Contains a short bibliography on each topic.

371.26 *Grading and marking*

- 180 **Hillyer, V. M.** The "scale" method of marking. (Educ. Dec. 26: 217-23.)

371.27 *Examinations*

- 181 **Cattell, J. McK.** Examinations, grades and credits. (Pop. sci. mo. Feb. 66: 367-78.)

A scientific study of methods and means of grading students; confined to college grades and based largely upon studies of Columbia university conditions.

- 182 **Hervey, W. L.** The action of teachers' examinations in the city of New York. (In Schoolmasters' association of New York and vicinity. Twelfth annual report, 1904-05. p. 73-89.)

The author, a member of the N. Y. City Board of examiners, explains clearly and in detail the purpose, methods and results of the system in New York, the advantages and disadvantages, and the general principles which should govern them.

- 183 **Jackson, W. R.** The present status of the certification of teachers in the United States. (In U. S.—Education, Comm'r of. Report for 1903. 1: 463-519.)

A tabulated survey furnishing details as to grades of certificates issued in different states, and by whom, where and for how long valid, and requirements as to scholarship and teaching ability necessary to obtain a particular one.

- 184 **Sargant, E. B.** The university and the Civil Service. O. Longmans, 1s.

"An address delivered at the University of the Cape of Good Hope. It is practically a history of the Civil Service examinations, a system now about half a century old, with an application to the special circumstances of Cape Colony." Spectator.

371.3 *Methods of instruction.*

For methods in special branches see 375 and its subdivisions.

- 185 **Bagley, W. C.** The educative process. 358 p. D. Macmillan, \$1.25.

CONTENTS: Functions of education.—The acquisition of experience.—The

functioning of experience.—The organization and recall of experience.—The selection of experiences for educational purposes: educational values.—The transmission of experience and the technique of teaching.

The author has made a valuable contribution towards raising instruction to the highest possible grade of excellence. His exposition of the responsibilities and duties of parents and teachers can be accepted with little or no reservation, but some of his illustrative statements and subsidiary generalizations are open to question. All who train teachers and make a study of education or psychology should master his theory of education. At first sight, the technical terms look formidable, but they are carefully explained and a copious index makes it easy to find definitions as dequired. Condensed from the *Athenæum*.

- 186 **Brothers of the Christian Schools.** Elements of practical pedagogy. 304 p. D. La Salle bureau of supplies, Fifty Second st., N. Y., \$1.25 net.

A practical handbook formulating principles briefly, but developing and insisting upon their more important application.

CONTENTS: Part I. Education.—Part 2. The school and school regulations.—Part 3. Organization of teaching.—Part 4. The specialties of the program. Part 5. Discipline.

- 187 **Cronson, Bernard.** Methods in elementary school studies; a brief outline. 167 p. D. Macmillan, \$1.25.

A compact statement of principles, with illustrations. For each subject it presents the aim, fundamentals of teaching it, the method, often outlined, with reasons for doing a thing.

CONTENTS: Reading.—Dictation.—Composition.—Grammar.—Literature.—Nature study.—Geography.—History.—Civics.—Arithmetic.

The author is principal of school 125, N. Y. City.

- 188 **Henderson, A.** Some notes on teaching. O. Marlborough, 1s. 6p. net.

371.42 *Manual training*

See also the papers printed in the N. E. A. Proc. p. 557-90, under the Department of Manual training and the titles under section 375.6 of this bibliography. The Manual training magazine, a quarterly edited by C. A. Bennett, Bradley polytechnic institute, Peoria, Ills., is the leading journal devoted to this subject.

- 189 **Haney, J. P.** Manual training in the elementary school. Educ. May, 25: 515-24.)

A presentation of the principles which should guide in the teaching of manual training, and suggestions as to when and how the subject should be taught. Also in N. E. A. Proc. p. 253-59.

- 190 **Harvey, L. D.** Manual training in the grades. (In N. E. A. Proc. p. 121-34.)

A discussion from the philosophical, as well as the practical standpoint, of the educational values gained from manual training.

- 191 **Holton, M. A., and Rollins, A. F.** Industrial work for public schools. 134 p. O. Rand McNally, 90c.

Clay-modeling, weaving, raffia work, whittling, sewing and iron work are described simply, illustrated copiously and effectively and given a literary setting by inclusion of some admirably chosen verses. The work described has all been tested by the authors in the Minneapolis schools.

A useful list of dealers in and prices of necessary material is added and a list of 36 books on Industrial work.

- 192 **Horth, A. C.** Educational wordwork: a text-book for the use of

instructors and students in the elementary and secondary schools.
158 p. D. Spon. \$1.

A graduated course in woodworking, for 1st, 2d, and 3d years. Chapters 5, 6, and 7, p. 106-29, treat of discipline, organization and method, and the instruction of the physically and mentally deficient.

- 193 **Morrison, G. B.** The present status and future of manual training in the high school. (In National society for the scientific study of education. Fourth year-book. pt. 2. p. 18-37.)

A review of the origin, growth and present condition of manual training, a discussion of the relation between vocational and cultural studies, and of the proper function of manual training.

- 194 **Parsons, W. B.** The practical utility of manual and technical training. (In N. E. A. Proc. p. 134-41.)

Presented from the point of view of results achieved and of ends attained, rather than of methods.

- 195 **Woodward, C. M.** Manual, industrial and technical education in the United States. In U. S.—Education, Comm'r of. Report for 1903. 1: 1019-46.)

Considers its origin, methods of instruction, program, equipment, and relation to life.

- 196 ——— Manual training in the secondary grades and in colleges. (In N. E. A. Proc. p. 262-70.)

Practical suggestions as to aim, methods, outfit, and time to be devoted to it.

- 197 ——— Manual training: theory and method. (Outlook, Dec. 81: 927-32.)

Parts identical with article in N. E. A. Proc. p. 262-70.

371.5 *Government, discipline, punishment*

- 198 **Clapp, H. L.** Unrecognized causes of corporal punishment. (Educ. Apr. 25: 490-500.)

A presentation of generally overlooked conditions in school buildings and school courses which chafe pupils and so lead to disorder.

- 199 **Cooper, E. H.** Twentieth century child. 311 p. D. Lane, \$1.50.

A dispassionate discussion by a bachelor of the management of a child, at play, lessons, in sickness, in company, &c. He confines himself to English children of the higher class, speaking from an intimate acquaintance and in a familiar tone. He supplements the book with stories by children and about them. Of slight value. The greater part of the book relates to the care of the child, and but a few chapters have educational significance.

- 200 **French, C. W.** The school city. (School rev. Jan. 13: 33-41.)

Read at the conference of the Departments of History and Political Science, 18th Educational conference held Nov., 1904, at the University of Chicago.

Another name for "pupil-government" and "self-government." Reasons for its apparent failure and an inquiry into its real meaning and possibilities and what it has accomplished.

- 201 **The "School City" in Philadelphia.** (Rev. of rev. Aug. 32: 235-36).

Started in Philadelphia to teach children to be citizens. Includes also the laws governing their "School City."

See also Outlook, Aug. 30: 946-48 for The school city; its effects.

371.52 *Attendance, truancy*

- 202 **Halleck, R. P.** Why do so many first-year pupils leave the high school? How can they be induced to remain? (In N. E. A. Proc. p. 436-43.)
- 203 **Perrin, J. W.** The truancy problem in Massachusetts, 1845-1890. (Jour. of ped. Mar. 17: 214-24.)
A history of the efforts to solve the problem.

371.6 *School buildings and furniture*

- 204 **Beede, F. H.** The public high school building at New Haven, Conn. (School rev. Feb. 13: 89-104.)
Description of the cost, plans, equipment, &c.
- 205 **Gerhard, W. P.** Bibliography of school architecture and hygiene. (Amer. architect, July. 88: 14-16.)
Includes English, American and German books, magazine articles and reports. Arranged according to year of publication.
- 206 ——— Essentials of school sanitation. (Amer. architect, June. 87: 177-79, 183-85.)
Practical directions and suggestions, including also such subjects as ventilation, fire protection, &c.
- 207 **Larkins, C. D.** The Manual training high school, Brooklyn, New York. (School rev. Dec. 13: 741-57.)
A description of the building, its equipment and cost.
- 208 **Moore, J. A.** The schoolhouse: its heating and ventilation. 204 p. O. Joseph A. Moore, Roslindale, Bost., \$2.
"The writer having been for the last eighteen years engaged in the inspection of public buildings in Massachusetts, and in supervising the construction of and testing the various methods of heating and ventilation, especially in schoolhouses, presents some suggestions as to the construction, heating and ventilation of such buildings. The class selected are those of small or moderate size. He does not attempt to give theoretical or scientific descriptions or arguments, but simply such methods and plans as have been proved by actual experience to give satisfactory results." Introduction.
Eminently practical. The plans for buildings and the tables for measuring air, &c., make the book very serviceable and suggestive.
- 209 **School architecture.** (In N. E. A. Proc. p. 836-51.)
The word "Architecture" is used to embrace everything necessarily involved in the construction and equipment of a well appointed school building.
Seymour Davis outlines the progress made in the various parts of school fittings and buildings.
C. B. J. Snyder discusses needed legislation in School architecture.

371.64 *School libraries; libraries and schools*

- See also the papers printed in the N. E. A. Proc. p. 853-79 under the Library department. The Library Journal for April, 1905, is a School number.
- 210 **Brett, W. H.** The school and the library. (In Michigan school-masters' club. Proceedings at the fortieth meeting held in Ann Arbor, 1905. p. 2-10.)
The librarian of the Cleveland public library, after giving brief statistics

of the growth of the public library and of its use by the schools, speaks of how the library and school can co-operate.

H. O. Severance and H. M. Slawson discuss the question.

- 211 **Ford, M. C.** The school library question in New York city. (Library jour. Apr. 30: 211-14.)

What can be, has been, and ought to be done to furnish school children with books.

- 212 **Kroeger, A. B.** The place of the library in technical education. (Library jour. July. 30: 393-99.)

The attitude of the librarian and library towards technical studies and education, what they can do to help and what some special libraries have done, is clearly told.

371.7 *School hygiene*

- 213 **Barrows, Anna.** The lunch-room in the high school. (School rev. Mar. 13: 213-20.)

A presentation of what has been done along this line, especially in Boston, and of its special needs.

- 214 **Burnham, W. H.** The hygiene of home study. (Ped. sem. June. 12: 213-230.)

A summary of statistical and comparative tests made at various places, in regard to home and school work and the hygienic effect on children, with conclusions drawn therefrom. Contains a bibliography of the subject.

- 215 **Hutchinson, Jonathan.** Parish school dinners and museums. (Nineteenth cent. Feb. 37: 324-30.)

An exposition of good effects which would result from their inauguration.

- 216 **Jacobi, Abraham.** The prevention of tuberculosis in school children. (Teachers coll. record. Mar. 6: 14-29.)

With stress upon the manifestations of the disease and upon how children should be cared for in school.

- 217 **Kinne, Helen.** School luncheons. Teachers coll. record. Mar. 6: 48-64.)

Its problems presented, and description of what is done in some typical places, giving necessary fixtures, service, cost and menus.

- 218 **Macnamara, T. J.** In corpore sano. (Contemp. rev. Jan. 87: 238-48.)

With London especially in view, the author considers what the state should and can do for school children to better their physical condition and fit them to be good citizens. Includes physical training, food, medical supervision, housing, baths, &c.

- 219 **Miller, E. L.** The lunch-room at the Englewood high school. (School rev. Mar. 13: 201-12.)

Aims to show how the situation demanding a lunch for pupils has been met in one Chicago high school, and to discuss some social and legal phases of the lunch-room problem.

- 220 **Wald, L. D.** Medical inspection of public schools. (Annals of Amer. acad. Mar. 25: 290-96.)

A detailed description of the growth of inspection in New York city, and what the results are.

Published also as American academy. Publications no. 455. 15c.

- 221 **Weeks, J. E.** The care of the eyes of children while at school. (Teachers coll. rec. Mar. 6: 30-42.)

Discusses eye troubles of children, the treatment desirable, and the causes and means of prevention.

- 222 **Williams, A. S.** The investigation of fatigue from the teacher's point of view. (*Jour. of ped.* Mar. 17: 199-213.)
A brief presentation of what has been done on this subject, and the methods pursued.
- 223 **Wood, T. D.** The scope of school hygiene in modern education. (*Teachers coll. rec.* Mar. 6: 1-13.)

371.73 *Physical training; gymnastics; athletics*

See also papers printed in the N. E. A. Proc. p. 755-79 under the Department of physical education.

- 224 **American physical education association.** Papers and proceedings of the national convention in New York city, April 17, 1905. (*In Amer. phys. educ. rev.* June. 10: 91-184.)
The main topic discussed was dancing.
- 225 **Athletics in college life.** (*Outlook*, July. 80: 561-63; 569-72; 572-76.)
Control of college athletics. Where it should lie.
The money power in college athletics, by Clarence Deming. Describes what is done with the money appropriated for athletics; with special reference to Yale. Reflections of a sub-Freshman's father, by Cunningham Laplace. Discusses the sort of life and work desired for the son.
- 226 **Eliot, C. W.** Football. (*In Harvard college. Reports of the president and the treasurer, 1903-04.* Harvard university, Cambridge, Mass., no price. p. 18-22. [University publications, v. 2, no. 4.])
A plain presentation of the objections to this game.
- 227 **Gulick, L. H.** Amateur status of athletics in educational institutions. (*In Schoolmasters' association of New York and vicinity. Twelfth annual report, 1904-05.* p. 5-14.)
A discussion by Dr. Gulick and others of the distinction between amateur and professional athletics, and where the line should be drawn in colleges.
- 228 ——— Final report of the athletic committee of the Schoolmasters' association. (*In Schoolmasters' association of New York and vicinity. Twelfth annual report, 1904-05.* p. 92-95.)
Contains the School principals' athletic agreement, a list of the co-operating schools and principals, and conclusions drawn from a year's experience under the agreement.
- 229 **Hall, E. H., and others.** Athletic professionalism in colleges. (*In New England association of colleges and preparatory schools. Addresses and proceedings, 1905.* p. 3-36.)
A discussion of the topic, "That the definition of athletic professionalism, as now written, is a source of demoralization in schools and colleges, and that the evils which this definition is intended to combat can be better met by limiting the number of games between institutions, and fixing standards of academic standing and academic age for the participants in such games."
- 230 **Hall, E. H.** Athletic professionalism and its remedies. (*School rev.* Dec. 13: 758-88.)
Presented to the twentieth annual meeting of the New England association of colleges and preparatory schools.
A consideration of the present rules governing amateur athletics, and a presentation of modified rules which would correct the evils of the former ones. Consists of this paper and discussions by A. W. Roberts, F. S. Luther, G. E. Fellows and A. E. Sterns.

- 231 **Harper, W. R.** Shall college athletics be endowed? (In his *Trend in higher education*. University of Chic. press, \$1.50. p. 276-84.)
A statement and consideration, pro and con, of some of the arguments for the endowment of college athletics.
- 232 **Hartwell, S. O.** Athletics in Michigan secondary schools. (In *Michigan schoolmasters' club. Proceedings at the fortieth meeting held in Ann Arbor, 1905*. p. 10-13.)
The revised rules for athletics, made by the committee on High school athletics, and the Rules governing Michigan secondary school athletics.
- 233 **Hartwell, E. M.** On physical training. (In *U. S.—Education, Comm'r of. Report for 1903*. 1: 721-57.)
Considers the meaning, nature and effects of physical training, its relation to other educational agencies, and also its distinctive features and dominant tendencies as they exist in the United States, in order to determine their significance and value.
- 234 **Kingsbury, G. E.** Physical education in its bearing on life. (*Educ. Dec.* 26: 224-30.)
From the point of its hygienic or practical advantages, its educative, its remedial, and its æsthetic or recreative standpoints.
- 235 **Lee, Joseph.** The playground as a part of the public school. (In *Nat. conference of char. and correction. Proceedings, 1904*. p. 459-71.)
Considers the kind, advantages, and equipment of the playground, and its function in a community. See also No. 178 and 179.
- 236 **McCurdy, J. H.** A study of the characteristics of physical training in the public schools of the United States. (*Amer. phys. educ. rev. Sept.* 10: 202-13.)
- 237 **Mathews, Shailer.** Reforming athletics in the Central West. (*World to-day*, Nov. 9: 1221-26.)
With special reference to foot-ball. A description of the spread of the game and the so-called "reforms."
- 238 **Meath, Earl of.** Universal military training for lads. (*Nineteenth cent. May.* 57: 734-44.)
Arguments for it. The British point of view.
- 239 **Needham, H. B.** The college athlete: how commercialism is making him a professional. (*McClure's mag.* June. 25: 115-28; July. 25: 260-73.)
Pt. 1. Recruiting and subsidizing.
Pt. 2. "Summer ball," the gate-money evil, and "unnecessary roughness" in football.
Exposes the evils of present conditions, illustrating by concrete examples.
- 240 **Paine, R. D.** The spirit of school and college sport. (*Century*, Aug. 70: 483-503; Nov. 71: 9-116.)
I. American and English rowing. II. English and American football.
A description of the schools, the students, the ideas for which they stand.
- 241 **Stauffer, N. P.** College rowing in America. *Booklover's mag.* June. 5: 781-93.) College track athletics. (*Booklover's mag.* May. 5: 583-93.)
A description of the sport in various colleges, what is done and the way it is managed.

371.8 *Student life, customs and organizations*

- 242 **Good and evil of college fraternities.** (Independent, Oct. 59:799-804.)

By a fraternity man.

- 243 **Harper, W. R.** Alleged luxury among college students. (In his *Trend in higher education.* University of Chic. press, \$1.50. p. 312-16.)

Brief generalizations upon the spending of money by students, and its results.

- 244 **Keller, P. G. W.** Open school organizations. (School rev. Jan. 13:10-14.)

Read at the 18th Educational conference, held Nov., 1904, at the University of Chicago. Aims to show how open organizations can be made to take the place of secret ones in a school.

- 245 **Morrison, G. B.** Social ethics in high school life. (School rev. May, 13:361-70.)

Read before the North Central Association of Colleges and Secondary schools, Chicago, April 1, 1905, and published in their Proceedings of the tenth annual meeting, p. 116-30.

A presentation of the problem of societies and social life in the schools, concluding that the former should be prevented and pupils furnished with other elements to take its place in their lives.

- 246 **National educational association—Committee on secret fraternities.** Report. (In N. E. A. Proc. p. 445-51.)

Investigation reported, and reasons given for condemning absolutely secret organizations.

- 247 **Osler, William.** The student life; a farewell address to Canadian and American medical students. (Medical news (N. Y.) Sept. 87:625-33.)

Hints helpful in the proper adjustment of a student to life and to his fellow men. Not limited to medical students.

- 248 **Puffer, J. A.** Boys' gangs. (Ped. sem. June. 12:175-212.)

A tabulation and discussion of results gained from questions about gangs asked boys entering the Lyman School for Boys, Westborough, Mass. Such subjects as nationality, time and place of meeting, territorial limits, leader, starting of gang, treatment of girls, settling of disputes, plaguing people, &c., treated very fully, with quotations from actual replies given by the boys. A short bibliography also included.

- 249 **Smith, C. A.** Honor in student life in colleges and universities. (Educ. rev. Nov. 30:384-95.)

Read before the Department of higher education of the National Educational Association at Asbury Park, July 5, 1905. An optimistic presentation of conditions, with suggestions for their betterment.

- 250 **Smith, S. R.** Report of the committee on the influence of fraternities in secondary schools. (School rev. Jan. 13:1-10.)

The views of principals of high schools, of the fraternities and of presidents of leading colleges and universities were asked for. The results are discussed and the arguments for and against such organizations given.

Read at the 18th Educational conference, held Nov., 1904, at the University of Chicago.

- 251 **Wetzel, A.** Student organizations in a high school. (School rev. May. 13:429-33.)

A description of student organizations in the high school at Trenton, N. J. and the way they are managed.

371.9 *Education of special classes*

See also papers printed in N. E. A. Proc. p. 881-923 under the Department of special education.

For statistics regarding schools for the colored race and for defective classes, see U. S.—Education, Comm'r of, Report for 1903. 2: 2253-85, 2305-32.

- 252 **Chace, L. G.** Public school classes for mentally deficient children. (In Nat. conference of char. and correction. Proceedings, 1904. p. 390-401.)

Considers what is being done in Germany, England, Providence, Philadelphia and New York city.

- 253 **Javal, Émile.** On becoming blind; tr. by C. E. Edson. 191 p. D. Macmillan, \$1.25 net.

A pathetic narrative of a well-known oculist who lost his sight suddenly in his sixty-second year. Tells of his efforts to live with the least trouble to others, and of his thoughts on various subjects. The book is replete with psychological and pedagogical suggestions of intense interest to those whose attention is directed to this subject. Condensed from the Ped. sem.

- 254 **Machonachie, R.** On the education of native races. (In Great Britain—Education, Board of. Special reports on educational subjects. v. 14, p. 208-49.)

A general presentation of education for the natives in all parts of the world, as carried on by the Church Missionary Society, with which organization the author was for many years intimately connected. Hints for guidance in such work, and principles for governing one when dealing with natives are to be obtained from the article. P. 233-49 consisting of extracts from notes on various subjects, by actual workers in mission fields, add greatly to the interest of the article.

- 255 **Moon, R. C.** Books and libraries for the blind. 6 p. O. N. Y., printed for private circulation.

Read before the Penn. library club and N. J. library association, Atlantic City, Apr. 1, 1905. A brief history of the efforts to provide books for the blind, and a summary of various institutions and societies for helping them to read.

- 256 ——— The education of the blind, with especial reference to the use of the Moon alphabet 12 p. O.

Address delivered at the World's fair, St. Louis, Sept. 10, 1904.

Reprinted from Annals of ophthalmology, Oct., 1904.

A brief statement of efforts to produce a readable type for the blind, before Dr. Moon's time, and a description of his work and its results.

- 257 **Pennsylvania home teaching society and free circulating library for the blind.** Report, 1905. 36 p. O. Robert C. Moon, sect'y, 1319 Walnut st., Philadelphia, Pa.

A presentation of the condition and work of the society.

371.94 *Negro education*

- 258 **Benson, W. E.** The prevention of crime among colored children; manual training as a preventive of delinquency. (In Nat. conference of char. and correction. Proceedings, 1904. p. 257-68.)

Considers what influences make for or against crime in a community.

- 259 **From servitude to service;** being the Old South lectures on the history and work of Southern institutions for the education of the negro. 232 p. D. Amer. Unitarian assoc., \$1.10 net.

The history and work of the six leading institutions of the South for the education of the negro, by thoughtful, experienced men, workers in the respective colleges described. Altogether an interesting statement of the problems fronting our educators and one worth considering.

CONTENTS: Introduction, by R. C. Ogden.—Howard university, by Prof. Kelly Miller.—Berea college, by Prof. W. G. Frost.—Tuskegee institution, by Prof. Roscoe Conkling Bruce.—Hampton institution, by Principal H. B. Frissell.—Atlanta university, by Prof. W. E. B. DuBois.—Fisk university, by President James G. Merrill.

- 260 **Hampton negro conference.** Ninth annual report. 95 p. O. Hampton, The institute press.

Published as the Hampton bulletin, vol. 1, no. 3.

W. T. B. Williams. Colored public schools in southern cities. p. 15-37.

T. C. Walker. Sunday schools in Virginia. p. 54-60.

- 261 **Jenifer, G. D.** A day at Tuskegee. (Educ. Oct. 26: 87-96.)

A description of its life and routine.

- 262 **Smith, W. B.** Nurture? or Nature? (In his Color line. McClure, \$1.50 net. p. 75-110.)

A general discussion of the mental endowment and ability of the negro to receive culture and education. The first part a comparison of brain weights and conclusions drawn therefrom.

- 263 **Washington, B. T., ed.** Tuskegee and its people; their ideals and achievements. 354 p. O. Appleton, \$2 net.

The volume here presented has been edited by Mr. Emmett J. Scott, executive secretary of the Tuskegee institute. The task of editing which the principal had expected to perform has been so well done that it has only been necessary to review the manuscript after its preparation for the publishers, and to forego the strict editorial revisioning planned. cf. General introduction.

CONTENTS: I The school and its purposes.—II. Autobiographies by graduates of the school.

An accurate, forceful portrait of the Tuskegee of to-day, and the best one book upon this movement. Part 2 contains 17 autobiographic sketches by graduates representing as many different occupations. Each breathes the sincerity, honesty and hopefulness which Tuskegee aims to instill into the minds she helps to form.

371.95 *Indian education*

See also papers printed in the N. E. A. Proc. p. 925-56 under the Dep't of Indian education.

- 264 **Indian rights association.** Twenty-second annual report of the executive committee for the year ending Dec. 31, 1904. 98 p. O. Phil., Office of the Indian rights ass'n.

The general condition of the Indian, social and educational, presented, with statements as to what is being done for him.

- 265 **Lake Mohonk conference of friends of the Indian and other dependent peoples.** Proceedings of the twenty-third annual meeting, Oct. 18-20, 1905. 228 p. O. Published by the Lake Mohonk conference, no price.

Much attention given to educational, as well as to some other Indian problems. Conditions in the Philippines, Hawaii and Porto Rico also considered.

- 266 **Moody, Harry.** Education of the Indians in Canada. (In Great Britain—Education, Board of. Special reports on educational subjects v. 14, p. 363-71.)

A brief presentation of the educational work to be done among the Indians and of what has already been accomplished.

372 ELEMENTARY EDUCATION

See the N. E. A. Proc. p. 373-422 for papers read in the Dep't of Elementary education.

See also nos. 187 and 309.

- 267 **Bathurst, K.** The need for national nurseries (Nineteenth cent. May. 57: 818-27.)

Describes conditions in English elementary schools where babies are sent, and, in consequence, suffer. Suggests plan to remedy this.

- 268 **Brooks, S. D.** The extension of high school influence. (Educ. rev. May. 29: 433-40.)

A consideration of how far and to what extent the influence of the high school may be extended into the elementary school, and what advantage will result therefrom.

- 269 **Bryant, S. C.** How to tell stories to children. 260 p. D. Houghton, \$1 net.

CONTENTS: The story-teller's art: Purpose of story-telling in school: Selection of stories to tell: Adaptation of stories for telling: How to tell the story: Some specific school-room uses: Stories selected and adapted for telling: Sources for the story-teller.

Discusses story-telling, its uses and the artistic and pedagogical principles underlying it. Half the book tells typical stories illustrating the best form for them. Simply and charmingly written, suggestive and practical in every way.

- 270 **Chamberlain, A. H.** Is the elementary school curriculum adjusted? (Elem. school teacher, Jan. 5: 302-10.)

A discussion as to whether the present curriculum meets the needs of the children, deciding that it does not.

- 271 **The elementary school teacher;** published monthly except during July and Aug. Univ. of Chic. press, \$1.50 per year.

This journal, while its chief purpose is to serve as an exponent of the methods in the University of Chicago school of education, has come to be the most suggestive periodical in the field of elementary education that is now published.

- 272 **Gilman, M. L., and Williams, E. B.** Seat work and industrial occupations: a practical course for primary grades. 141 p. D. Macmillan, 50c. net.

Definite lessons for the making of things by children; also directions how they should be taught.

- 273 **Keith, J. A. H.** Elementary education; its problems and processes. 325 p. D. Scott Foresman, \$1.25.

Author is professor of Pedagogy in Northern Illinois state normal school. He aims to "deal with concrete processes and problems with which every teacher is familiar; to work from this material, by analysis, description and argument, to educational principles; to introduce, in simple and concrete form and in connection with the discussions, those fundamental psychological truths which are the basis of all valid learning and of all successful method, and to emphasize the social view of education." Preface.

The treatment is broader in scope than the title indicates for the word "elementary" might with much propriety be discarded. The book deals with principles rather than practice, contains much wholesome advice and many helpful suggestions, has no literary style, brings forward nothing new and is too wrapped up in the worship and phraseology of psychology. The following extract reminds one of the reviewer's comment on a hopelessly mediocre book, "It will be read when the Bible and Shakspeare are forgotten, but not before." The extract, true in more than one sense, is this: "Psychology is so comprehensive a subject that one may study it for years and not know to what extent it is serviceable to teachers."

- 274 **Kilpatrick, V. E.** Departmental teaching in the elementary schools. (Educ. rev. May. 29: 468-85.)

A presentation of the departmental plan of instruction, a statement of its various advantages, its disadvantages, of the errors sometimes made in its introduction, and general considerations and suggestions.

- 275 **Lukens, H. T.** Fifth school year: a course of study with detailed selection of lesson material arranged by months and correlated. 213 p. D. Flanagan, 60c net. (School year ser.)

Divided by months, and subdivided by subject to be taught. Definite directions as to what must be taught, and how. Illustrations add somewhat to the value of the book. The author is a training teacher at the South-Western State Normal School, California, Pa.

"It is the newest book of the year and the most suggestive. It ought to be in the hands of, and if so, would be used by, every teacher in this grade in the country." Ped. sem.

- 276 **McDonnell, Michael.** The state of primary education in Ireland. (No. Amer. rev. Sept. 181: 386-91.)

A brief history and description of present conditions.

- 277 **McKeag, A. J.** Elementary education in England. (Ped. sem. Mar. 12: 69-85.)

A history, largely legislative, of the educational system from the time of Bell and Lancaster, and an analysis, on its various sides, of the present situation. Contains also a bibliography. 38 titles.

- 278 **Morss, C. H.** The practicability of the extension of high school influence. (Educ. rev. May. 29: 441-49.)

A discussion of ways and means.

- 279 **Plans and methods for the schoolroom.** 103 p. Q. Educational publishing co., 50c.

Outlines of definite lessons upon common objects from the animal and vegetable kingdom and including subjects in geography, with exact directions as to how they should be taught. Illustrated and largely tabular in arrangement tho reading consecutively. Suggestive and helpful.

- 280 **Udny, Rev. S.** Elementary secular instruction: the symbolic methods. Jour. of educ. (Lond.) Nov. 37: 737-40.)

After characterizing the two methods of teaching now used, the "literary" and the "technical," the writer describes a third, the "symbolic," which fuses the two and improves upon both.

372.2 *Kindergarten*

For additional kindergarten material see the files of the Kindergarten review and the N. E. A. Proc. p. 341-72. Also nos. 77 and 86.

- 281 **Beebe, Katharine.** The home kindergarten. 131 p. D. Akron, O., The Saalfeld publishing co., \$1.

Aims, by direction, hints and suggestions, to help a mother follow Froe-

bel's principles to the extent of "living with her children," and developing their faculties by wholesome work and play. A program for each day of the year is also outlined. The book is essentially practical and very suggestive along these lines.

- 282 **Fisher, Laura.** The kindergarten. (In U. S.—Education, Comm'r of. Report for 1903. 1:689-719.)

A concise historical account of the kindergarten in the United States; also its principles and practices, and outlines for courses of study in training schools.

- 283 **Gunn, J.** The infant school; its principles and methods. 412 p. O. Nelson, 3s. 6p.

The author aims, and successfully, to show the necessity of fitting the teaching to the child, not the child to the curriculum. His theme is the ordinary child, from the age when he can go to school till his sixth or seventh year. The book is broad in scope and worthy of being thoughtfully read by young teachers in all infants' classrooms. It gives a thoro account, as far as psychology can assist us, of the important features of the nature and mind of a young child and his growth,—mental, physical and moral. It does not treat the historical side of the subject, and, in so far, it does not supersede Salmon and Hindshaw.

- 284 **International kindergarten union.** Proceedings of the twelfth annual convention, Toronto, Canada, April 18-21, 1905. 128 p. O. Mrs. Susan S. Harriman, Sec'y, 134 Newbury st., Boston, Mass.

- 285 **Seeley, Levi.** Play as an educational factor. (Jour. of ped. Dec. 18: 100-12.)

(To be continued)

V

THE DEBATE IN THE SENATE ON THE BILL TO INCORPORATE THE NATIONAL EDUCATION ASSOCIATION

(From the *Congressional Record*, June 25, 1906, p. 9399)

NATIONAL EDUCATION ASSOCIATION

The bill (H. R. 10501) to incorporate the National Education Association of the United States was announced next in order.

Mr. Culberson—I take it that that is a very important bill. A report has been made in support of it, which I have not had an opportunity to examine.

Mr. McCumber—I ask that the bill may go over, Mr. President.

The Vice-President—The bill will go over without prejudice.

(From the *Congressional Record*, June 29, 1906, p. 9883)

NATIONAL EDUCATION ASSOCIATION

Mr. Dolliver—I ask unanimous consent for the present consideration of the bill (H. R. 10501) to incorporate the National Education Association of the United States.

The Vice-President—The bill will be read for information, subject to objection.

Mr. Gallinger—I think that bill was read when it was considered the other day, Mr. President.

Mr. Hale—Let the bill be now read for the information of the Senate.

The Vice-President—The bill will be read for the information of the Senate.

The Secretary read the bill.

The Vice-President—Is there objection to the present consideration of the bill?

Mr. Hale—Mr. President, I listened as carefully as I might to the reading of the bill, because I had an apprehension that there might somewhere in the bill be some provision that would in some way in the future attach the association to be incorporated to the General Government. There have been cases, Mr. President, where in the closing hours of a session national corporations have been organized and provided for here and it was afterwards learned on examination that there was an attachment of certain provisions under which the General Government became involved in the

corporation, and a foundation would be laid for calling upon the Government afterwards to assist in the management and control of such corporations. I do not discover from listening to the reading of the bill any dangerous proposition of that kind. The only thing that lurks in it that has any reference to the Government is the direction to report from year to year to the Commissioner of Education as to the property of the corporation and perhaps as to its financial condition. I do not think that that is particularly objectionable. I do not think the bill goes far enough to in any way involve the Government, and as there is a final clause which preserves the right of Congress to amend or repeal the act I do not see that the incorporation of the Educational Association by Congress is dangerous. But it is a good thing, Mr. President, in these days to watch everything of this kind that is brought up here, because there are many projects that in the end will seek to involve the General Government, and they are likely to come up at any time. I am glad to say that I do not—I may be mistaken—but I do not, under the provisions of this bill, see any possibility of any call being made on the General Government or any attachment of this corporation. If I did see such a possibility, I should certainly object to the bill.

The Vice-President—Is there objection to the present consideration of the bill?

There being no objection, the Senate, as in Committee of the Whole, proceeded to consider the bill, which had been reported from the Committee on Education and Labor with an amendment, in section 9, page 10, line 24, before the word "and," to strike out "the 1st day of July, 1907," and insert "the 31st day of July, 1908;" so as to read:

And provided further, That in the event of the failure of the association to accept the charter granted by this act at said annual meeting then the charter of the National Educational Association and its corporate existence shall be, and are hereby, extended until the 31st day of July, 1908, and at any time before said date its charter may be extended in the manner and form provided by the general corporation law of the District of Columbia.

Mr. Dolliver—I ask that the Senate disagree to the amendment.

The amendment was rejected.

The bill was reported to the Senate without amendment, ordered to a third reading, read the third time, and passed.

VI

NOTES AND NEWS

Secretary
Shepard

At a meeting of the trustees of the National Educational Association held at Chicago on April 28, 1906, Dr. Irwin Shepard, whose term of service as Secretary of the National Educational Association was to expire in July, was reelected to his office for a new term of four years.

It was at the annual meeting of the National Educational Association held at Washington in 1898 that the office of paid and permanent secretary was first established. Dr. Shepard's previous years of service as secretary had indicated him as the one man most competent to fill the new and important post. His eight years of administration of the permanent secretaryship have demonstrated the full extent of his remarkable powers of organization and management. In most admirable and effective fashion Dr. Shepard has adapted or adopted the form of organization necessary to keep in closest touch with the membership of the Association and the educational forces of the country generally. He has reduced to perfect system the ways and means of caring for and carrying on the great annual meetings of the Association. His statistical records and accounts are not inferior to those of the best managed corporation in the land.

That Dr. Shepard may have many more years of effective service in the organization to whose interests he devotes his life, will be the wish of every member of the National Educational Association.

A Fair Question

"Every school or college must indeed be managed on sound business principles; but where the noblest group of college buildings becomes the 'plant,' where the daily question regarding any study is 'Does it pay?' where the president becomes a business manager and the faculty hired men, we

have simply converted, or rather perverted, education into trade." —From the New York *Tribune* report of the baccalaureate sermon of President Faunce of Brown University, June 17, 1906.

Is there any educational institution in the United States, or elsewhere, whose buildings are regarded as a "plant," whose daily question regarding any study is, "Does it pay?" or whose president is merely a business manager and its faculty hired men? If so, ought we not to have a bill of particulars, as the lawyers say, to point the moral and help us to clear thinking?

Where is the institution that is so hopelessly commercialized? Is it in New England? Is it Amherst, Bowdoin, Clark, Dartmouth, Harvard, Middlebury, Trinity, Williams, or Yale? Is it in the Middle States? Is it Colgate, Columbia, Cornell, Hamilton, Johns Hopkins, Pennsylvania, Princeton, Rochester, Rutgers, or Union? Is it one or more of the State Universities? Where is it?

If President Faunce means that we must not let our colleges and universities become such places as he describes, then there can be no difference of opinion. Nor, we may add, is there the slightest danger of their becoming such places. But if President Faunce, or any other leader of opinion, has a concrete case of a "commercialized" college or university in mind, then it ought to be named specifically.

**The Public Schools
of Washington,
D. C.**

At last, after long agitation and discussion, the public schools of Washington seem about to be relieved from the bondage under which they were put by the action of Congress taken a few years since at the instigation of a group of self-seeking local politicians.

Year by year the situation in the Washington schools has steadily grown worse, and the Board of Commissioners for the District of Columbia has not only proved incompetent to check the deterioration, but appears to have actively participated in bringing it about. Over the protests of the Commissioners and that of all the local influences that they have been able to array, Congress has

incorporated in a bill to fix and regulate the salaries of teachers, school officers, and other employees of the Board of Education of the District of Columbia, a provision to reorganize the Board of Education entirely. The people of Washington and of the United States—for the public schools of the capital city are supported in part by the people of the United States as a whole, and popular interest in their welfare is very great—are indebted primarily to Senators Burkett of Nebraska, Gallinger of New Hampshire, Scott of West Virginia, and to Congressmen Foster of Vermont, Goulden of New York, and Olcott of New York, for the reform that has been brought about. These men, with the able assistance of many of their associates in both Houses of Congress, have succeeded in securing action which ought to put an end to the unfortunate conditions that have too long prevailed in Washington. It is a matter for regret that Mr. John W. Ross and General Boynton did not live long enough to see this full fruit of their devoted public service and high public ideals.

By the terms of the new Act the control of the public schools of the District of Columbia is vested in a Board of Education to consist of nine members. The members of the Board of Education are to be named by the Supreme Court Judges of the District of Columbia, and will have authority to determine all questions of general policy relating to the schools, to appoint the executive officers of the school system, to define their duties, and to direct expenditures.

A superintendent of schools is to be appointed to hold office for a term of three years, and following the provision made in the city of New York and elsewhere, he is to have a seat in the Board of Education with the right to speak but without the right to vote.

A new schedule of salaries has been adopted which materially increases the compensation heretofore paid to the teachers, and in so far greatly ameliorates existing conditions.

It now rests with the new Board of Education to assume full and complete responsibility for the schools of the District and to free themselves completely from the various malign influences, financial, real estate, political, and

personal, which have of late sought to dominate the educational affairs of the District. Their first duty should be to appoint a new superintendent of schools, and they should search the nation over for a man of first-class reputation and wide experience. Washington is a large city. Its school system is extensive. It occupies a unique place in the nation. The superintendent of schools of Washington, therefore, should be a man of equal professional eminence with the superintendents of New York, Chicago, St. Louis, and other cities of the first rank. If the new Board of Education will refuse to be dominated by any outside influences, and will choose an educator of distinction as superintendent of schools, all else is likely to go well.

NOTE.—Since the foregoing paragraphs were put into type, Mr. William E. Chancellor, Superintendent of Public Schools of Paterson, N. J., has been appointed to the Superintendency of Schools of the District of Columbia.

The Carnegie Foundation

Mr. Carnegie may well view with pride and satisfaction the results already apparent of his gift of ten million dollars to establish a fund to provide pensions or retiring allowances for college and university teachers who have become, thru age or disability, incapacitated for further effective service. He intrusted this fund to a board of Trustees composed of men who are in close touch with actual academic conditions, and who have immediate personal knowledge of what ought to be done to improve those conditions. The Trustees of the Foundation, themselves accustomed to administrative responsibility, knew that the successful administration of their new trust depended upon obtaining an executive officer of the highest competence. They were so fortunate as to secure for their president Dr. Henry S. Pritchett, who, as teacher, practical engineer, man of science, and educational administrator, had amply proved the possession of those qualities most to be desired in the President of the Carnegie Foundation.

President Pritchett himself described in the *EDUCATIONAL REVIEW* for June last the policy which, after a year of careful study of conditions, had been unanimously adopted by the

Trustees of the Carnegie Foundation. This policy, as will be seen by reference to Dr. Pritchett's article, is broad and liberal and one conceived in the interest of sound standards of higher education.

Inasmuch as the Trustees of the Carnegie Foundation are to provide retiring allowances for college and university teachers, it at once became incumbent upon them to determine what shall be held to constitute a college or a university. In adopting the legal definition of college contained in the statutes of the State of New York, and in requiring the possession of a free income-bearing endowment of not less than \$200,000, the trustees fixed a standard which can be met in the more thinly settled and less wealthy sections of the country as well as elsewhere, and below which no institution worthy to have the name of college should be permitted to fall.

By the terms of Mr. Carnegie's gift, the Trustees were to exclude from the benefits of the Foundation institutions under denominational or sectarian control. In most cases the determination as to whether a given institution was denominational or sectarian, or not, was easy. In a few cases conditions were so complicated that it became hard to decide whether the institution fell on one side of the line or the other. In each case the Trustees have adopted the generous policy of giving the institution in question the benefit of the doubt.

It will be perfectly possible for a large number of institutions to qualify for a place on the approved list of the Carnegie Foundation either by securing a release from conditions of denominational control that are no longer effective or important, or by raising their standard of work to a point where it can be recognized by the Foundation as truly college work. One most beneficent result from the policy adopted by the Trustees of the Carnegie Foundation is certain to be this standardizing of higher institutions. It will no longer be possible for institutions thruout the country to masquerade under names to which they are not entitled, without the country being apprised of that fact thru the publication of the list of institutions which do meet the standard set by the Foundation.

The first retiring allowances were awarded by the Trustees

to take effect as of July 1, 1906, and allowances amounting to more than \$70,000 a year were voted. The list of scholars and teachers who are the recipients of these allowances is truly an honor-roll of American scholarship and teaching service.

The most noteworthy name upon the list is that of William T. Harris, United States Commissioner of Education, and the most significant action that the Trustees of the Carnegie Foundation could take was to tender to Dr. Harris the place of honor at the head of the first list of American scholars and educators who are to receive retiring allowances. Dr. Harris's pre-eminent services to the people of the United States thru his services to their teachers and their schools can hardly be overestimated. For nearly half a century his has been the leading mind and the leading voice in American philosophical and educational study and discussion. For seventeen years he has given to the United States Bureau of Education a distinction that its founders never dreamed of. His reports are a veritable treasure-house of information, suggestion, and wise reflection. That this work at the Bureau has been done, to some extent at least, at the cost of productive scholarship in the fields of philosophy and educational theory, is a matter for regret; but now, released from the burden of official care and from the wear and tear of daily routine in a public office, Dr. Harris will be able to give his undivided attention and strength to those studies which have delighted him thru his entire life, and which he has adorned by some of the most luminous expositions to be found in our language. To lose Dr. Harris from the Bureau of Education would be a serious matter indeed if in return we were not to gain the full extent of his great power for productive scholarship.

**New Commis-
sioner of Educa-
tion**

In his choice of a successor to Dr. Harris, President Roosevelt has been most happy.

In our judgment he has chosen not only the best man available, but the best possible man. In succession to Dr. Harris it was plain that, unless the standard of the Bureau was to be hopelessly lowered, the new Commissioner must be of philosophic temper and training, of experience in and

sympathy with school and college work of various kinds and in all parts of the nation, and a man trusted and respected by the teaching profession everywhere. Professor Elmer Ellsworth Brown of the University of California is just such a man, and his appointment, promptly made, has been hailed with approval. He is in the prime of life and will, we trust, have many years of administrative distinction and productive scholarship in the high post to which he has been called.

**A University
Document**

Because of its interest to readers of the EDUCATIONAL REVIEW, we give space to the following circular letter addressed to the German newspapers of the United States, which was issued from the office of the President of the University of Illinois in June last:

The University of Illinois, which will confer the honorary degree of Doctor of Laws upon the German Ambassador to the United States, Baron von Speck-Sternburg, on the occasion of his visit to the University on the thirteenth of June, is one of the great American state universities which have been established in the last few years, and which have shown a most remarkable growth. It is well known that the older American universities, like Harvard and Yale, are not state institutions. They are purely private institutions. Within the last fifty years a great group of state universities has grown up, mostly in the Mississippi Valley, which are beginning to rank in equipment and importance with the oldest foundations of the country. The Universities of Michigan, Wisconsin, Minnesota, Iowa, Missouri, Illinois, Indiana, and Ohio form a most remarkable set of higher institutions in the very center of the United States. Some of these institutions, tho under the auspices of the individual states, were really founded upon the initiative of the federal government. This was the case with Illinois, which has shown the most remarkable growth of any of the great institutions in the last fifteen years. In 1890 it had less than five hundred students. The registration for the present year will exceed four thousand. The budget of the university exceeds now a million of dollars a year, where fifteen years ago it was less than a hundred thousand. The six great state universities of the Mississippi Valley had, during the past year, a total attendance of over two thousand more than the six most prominent institutions in the older states of the Atlantic seaboard.

The University of Illinois has recently laid broad and deep the foundations of a department of modern languages, especially of the Germanic languages, which enables it to rank in this respect with the older institutions.

The President of the University, Dr. Edmund J. James, has always shown the keenest recognition of the importance and significance of the

German element in the history of the United States. He received a considerable part of his own training in German Universities, having taken the Doctor's Degree at the University of Halle in the year 1877, under the well-known Johannes Conrad. The invitation to the German Ambassador to deliver the commencement address at the university is in pursuance of a policy of the present administration to develop the study of Germanics in a thoroly adequate and satisfactory way. President James has, in his work of recognition for the services of Germany in the scientific and practical world, the assistance, in his wife, of a remarkable woman of German birth, the daughter of a Lutheran clergyman at Halle, and the granddaughter of the Philosopher Gerlach, professor for fifty years at the University of Halle, and great-granddaughter of another professor at Leipsic. She has won for herself and the country of her birth an unusual place in the minds and hearts of the academic communities of which she has been a part; for President James has, either as professor or president, been associated with three other great American universities, the University of Pennsylvania, the University of Chicago, and Northwestern University. That the Germans appreciate the attitude of President James is evidenced by the fact that he was one of the orators selected on the occasion of the great Bismarck celebration some years ago in Philadelphia, and recently in the memorial service to Carl Schurz in Chicago.

**Honorary Ph. D.
Degree**

The newspapers report that the following degree of Doctor of Philosophy, *causa honoris*, was conferred at the close of the last academic year:

Syracuse University—W. K. Weeks of Syracuse.

EDUCATIONAL REVIEW

OCTOBER, 1906

I

THE ENDOWMENT OF MEDICAL RESEARCH ¹

The support of hospitals has always made a strong appeal to the philanthropy of the State and of individual citizens, and the importance to the community of educated physicians has been appreciated, altho in this country until recent years most inadequately, but the recognition of medical science as a rewarding object of public and private endowment is almost wholly the result of discoveries in this department of knowledge made during the last quarter of a century. The establishment, in 1901, of the Rockefeller Institute for Medical Research, with its laboratories formally opened today, bears eloquent witness to the awakening of this enlightened and beneficent sentiment.

While the scientific study of infectious diseases is of course not of recent origin and had been pursued as a part of the functions of health departments and of university laboratories of hygiene and of pathology, the first provision of a special laboratory for this purpose was made by the German Government in 1880, in the Imperial Health Office in Berlin, and to the directorship of this laboratory was called from his country practice Robert Koch, who four years before had startled the scientific world by his memorable investigations of anthrax.

The supremacy of Germany in science is due above all to its laboratories, and no more fruitful record of scientific discoveries within the same space of time can be found than that

¹ An address delivered at the formal opening of the Laboratories of the Rockefeller Institute for Medical Research, New York, May 11, 1906.

afforded by this laboratory during Koch's connection with it, from 1880 to 1885. Thence issued in rapid succession the description of those technical procedures which constitute the foundation of practical bacteriology and have been the chief instruments of all subsequent discoveries in this field, the determination of correct principles and methods of disinfection, and the announcement of such epochal discoveries as the causative germs of tuberculosis,—doubtless the greatest discovery in this domain,—of typhoid fever, diphtheria, cholera, with careful study of their properties.

The leading representative, however, of the independent laboratory devoted to medical science is the Pasteur Institute in Paris, founded in 1886 and opened in 1888. The circumstances which led to the foundation of this institute made probably a stronger appeal to popular sympathy and support than any others which have ever occurred in the history of medicine.

There stood in the first place, the personality and the work of that great genius, Louis Pasteur, of noble and lovable character, one of the greatest benefactors of his kind the world has known, who for forty years had been engaged, often under adverse conditions, in investigations which combined the highest scientific interest with important industrial and humanitarian applications. Pasteur's revelation of the world of microscopic organisms in our environment—the air, the water, and the soil—and his demonstration of their relation to the processes of fermentation and putrefaction, had led Lister in the late sixties, even before anything was definitely known of the causative agency of bacteria in human diseases, to make the first and most important application of bacteriology to the prevention of disease by the introduction of the principles of antiseptic surgery, whereby untold thousands of human lives have been saved.

In 1880, came the most momentous of Pasteur's contributions to medical science and art in the introduction of the method of active immunization by the use of the living parasites of the disease attenuated in virulence, a method which until this date had remained without further application since its employment by Edward Jenner in 1796 in vaccinating against

smallpox. Pasteur's researches in this field of immunity, marvelous in their originality, ingenuity, and fertility of resource, culminated in 1885 in the announcement of his successful method of protective inoculation against that dread disease, rabies, and most of those here present will recall the enthusiasm with which this great triumph of experimental medicine was hailed thruout the civilized world.

It was under the immediate impression and the incentive of this discovery, and as a mark of gratitude to Pasteur, that over two and one-half million francs were raised within a short time by international subscription for the construction and endowment of an institute to bear his name, where the Pasteur treatment was to be carried out and ample facilities afforded for investigations of micro-organisms and the problems of infectious diseases. This model institute, much enlarged since its foundation and after the death of Pasteur under the directorship, first of Duclaux, and now of Roux, and in one of its most important divisions, of Metchnikoff, has been a fruitful center of productive research and thru its contributions to knowledge affords a signal illustration of the benefits to science and to humanity of the endowment of laboratories for the advancement of medical science.

It was under much the same influences that the important Imperial Institute for Experimental Medicine in St. Petersburg, with even wider scope than the Pasteur Institute, was founded and munificently endowed by Prince Alexander of Oldenburg in 1890.

In the following year, the Prussian government established in Berlin, under the directorship of Professor Koch, the admirably organized and equipped Institute for Infectious Diseases, to which is attached, as to the Pasteur Institute, a hospital for infectious diseases. This and the excellent Institute for Experimental Therapeutics, in Frankfort, under Professor Ehrlich's direction, founded also by the Prussian government in 1896, are unsurpassed in their scientific activities and in the number and value of their contributions to our knowledge of infection and immunity.

In 1891, was founded in London the British, later the Jen-

ner, and now the Lister Institute of Preventive Medicine, designed to be a national institute similar in character and purpose to the Institut Pasteur in Paris. The funds were contributed by the public, and subsequently increased by Lord Iveagh's generous gift of two hundred and fifty thousand pounds.

Within less than a year after the foundation of the Rockefeller Institute for Medical Research, the Memorial Institute for Infectious Diseases was founded in Chicago by Mr. and Mrs. Harold F. McCormick, and placed under the capable direction of Professor Hektoen.

The Institute for the Study, Treatment, and Prevention of Tuberculosis, which bears the name of its beneficent founder, Henry Phipps, was incorporated in Philadelphia, in 1903, and, while devoted to a single disease, it must be ranked among those of wide scope, when we consider the magnitude and surpassing importance of the problems pertaining to this disease.

It may also be noted that the Carnegie Institution in Washington, with its unequaled endowment of ten million dollars, includes within its scope the support of biological and chemical investigations of great importance to medical science, so that our country now stands in line with Germany, France, and Great Britain in the opportunities afforded for research in medical and other sciences.

These various institutions have been mentioned as typifying the general aims and character of the Rockefeller Institute for Medical Research, rather than to afford any complete picture of the material aid now available for the advancement of scientific medicine. If the latter were the purpose, it would be necessary to travel far afield so as to include independent medical laboratories of more restricted scope, such as those for the study of cancer, the laboratories connected with departments of health, so well exemplified in our own country by those of the State Board of Health of Massachusetts, and of the Department of Health of the City of New York, hospitals and the laboratories connected with them, the medical laboratories of universities and medical schools, such as the Thomp-

son Yates and Johnston laboratories in Liverpool, and the splendid new laboratories of the Harvard Medical School, laboratories established in recent years for the study of tropical diseases, such as our government laboratories in Manila, and funds available for special grants to investigators.

Impressive and encouraging as is this remarkable growth within recent years, of laboratories devoted to the medical sciences, no one who has any knowledge of the vast field to be covered, of the difficulty and complexity of the problems, of the expenditure of money required, and of the returns in increased knowledge and benefits to mankind which have been attained and which may be expected in increasing measure, can for a moment suppose that the existing opportunities, considerable as they are, are adequate to meet the present and the future needs of scientific medicine.

As I have already stated, the wider recognition of medical science as a rewarding object of endowment, is a result of discoveries made during the last quarter of a century, and it is of interest to inquire why this increased knowledge should have borne such abundant fruit. The result is not due to any change in the ultimate aims of medicine, which have always been what they are today and will remain,—the prevention and the cure of disease,—nor to the application to the solution of medical problems of any higher intellectual ability and skill than were possessed by physicians of past generations, nor to the growth of the scientific spirit, nor to the mere fact of a great scientific advance in medicine, for the most important contribution ever made to our understanding of the processes of disease was the discovery by Virchow in the middle of the last century of the principles and facts of cellular pathology, the foundation of modern pathology.

The awakening of this wider public interest in scientific medicine is attributable mainly to the opening of new paths of investigation which have led to a deeper and more helpful insight into the nature and the modes of prevention of a group of diseases—the infectious diseases—which stand in a more definite and intimate relation to the social, moral, and physical well-being of mankind than any other class of diseases. The

problems of infection which have been solved, and kindred ones which give promise of solution, are among the most important relating to human society. The dangers arising from the spread of contagious and other infectious diseases threaten, not the individual only, but industrial life and the whole fabric of modern society. Not medicine only, but all the forces of society are needed to combat these dangers, and the agencies which furnish the knowledge and the weapons for this warfare are among the most powerful for the improvement of human society.

Great as was the material, intellectual, and social progress of the world during the past century, there is no advance which compares in its influence upon the happiness of mankind with the increased power to lessen physical suffering from disease and accident, and to control the spread of pestilential diseases. Were we today as helpless as the physicians of past centuries in the face of plague, smallpox, typhus fever, cholera, yellow fever, and other epidemic diseases, even if the existence of our modern crowded cities were possible, which may be doubted, the people would sit continually in the shadow of death. Great industrial activities of modern times, efforts to colonize and to reclaim for civilization vast tropical regions, the immense undertaking to construct the Panama Canal, are all in the first instance dependent upon the successful application to sanitary problems of knowledge, much of it gained in recent years, concerning the causation and propagation of epidemic and endemic diseases.

And yet probably a fair measure of the general realization of these facts is the provision by Congress that of the seven members of the Isthmian Canal Commission four shall be engineers without a word concerning a sanitarian on the Commission. There could hardly be a more impressive opportunity to demonstrate to the world the practical value of our new knowledge concerning the mode of conveyance of malaria and yellow fever, the two great scourges of Panama, than that afforded by the digging of the Isthmian Canal. The sanitary problem is not surpassed in difficulty by the engineering problem, but we may feel reasonable assurance that, with the sani-

tary control in hands as trained and capable as those of Colonel Gorgas, the ghastly experiences of the old French Panama Canal Company and in the construction of the railway will not be repeated.

To comprehend fully the degree and the character of the progress of modern medicine, requires a kind of knowledge and a breadth of vision not possessed by the average man. He is concerned mainly with the prompt relief of his own ailments or those of his family. Of the triumphs of preventive medicine he knows little or nothing. With such dull matters as the decline in the death rate by one-half, and the increase in the expectation of life by ten or twelve years during the last century, he does not concern himself. He takes no account of the many perils which have been removed from his pathway since his birth, and indeed at the time of his birth, nor does he know that had he lived a little over a century ago and survived these perils, he would probably be marked with smallpox.

While it is true that in the relief of physical suffering and in the treatment of disease and accident the progress has been great and the physician and the surgeon can do more, far more today than was possible to his predecessors, and while improvement in this direction must always be a chief aim of medicine, still it is in the prevention of disease that the most brilliant advances have been made. The one line of progress, that with which the daily work of the physician is concerned, affects the individual, the unit; the other, like all the greater movements in evolution, affects the race. It has been argued, with a certain measure of plausibility, that the interference with the law of the survival of the fittest, assumed to be a result of the success of preventive medicine, will bring about deterioration of the race. I believe the argument to be fallacious, and that we already have sufficient experience to show that there need be no serious apprehension of such a result.

Before some accurate knowledge of the causation of infectious diseases was secured, preventive medicine was a blundering science, not, however, without its one great victory of vaccination against smallpox, whereby one of the greatest scourges of mankind can be controlled and could be eradicated,

if the measure were universally and efficiently applied. The establishment upon a firm foundation of the germ doctrine of infectious diseases, the discovery of the parasitic organisms of many of these diseases, the determination by experiment of the mode of spread of certain others, and the experimental studies of infection and immunity, have transformed the face of modern medicine. The recognition, the forecasting, the comprehension of the symptoms and lesions, the treatment of a large number of infectious diseases, have all been illuminated and furthered, but the boon of supreme import to the human race has been the lesson that these diseases are preventable.

Typhus fever, once widespread, and of all diseases the most dependent upon filth and overcrowding, has fled to obscure, unsanitary corners of the world before the face of modern sanitation.

In consequence of the knowledge gained by Robert Koch and his co-workers, Asiatic cholera, to the modern world the great representative of a devastating epidemic, will never again pursue its periodical, pandemic journeys around the world, even should it make a start.

Of bubonic plague, the most dreaded of all pestilences, which disappeared mysteriously from the civilized world over two centuries ago, we know the germ and the manner of propagation, and, altho it has ravaged India for the last ten years with appalling severity, it can be and has been arrested in its spread when suitable measures of prevention are promptly applied.

Typhoid fever, the most important index of the general sanitary conditions of towns and cities, has been made practically to disappear from a number of cities where it formerly prevailed. That this disease is still so prevalent in many rural and urban districts of this country, is due to a disgraceful neglect of well-known measures of sanitation.

To Major Walter Reed and his colleagues of the Army Commission, this country and our neighbors to the South owe an inestimable debt of gratitude for the discovery of the mode of conveyance of yellow fever by a species of mosquito. On the basis of this knowledge, the disease, which had been long such a menace to lives and commercial interests in our South-

ern States, has been eradicated from Cuba, and can be controlled elsewhere.

Another army surgeon, Major Ross, acting upon the suggestion of Sir Patrick Manson, had previously demonstrated a similar mode of incubation and transportation of the parasite of malaria, discovered by Laveran, and it is now possible to attack intelligently and in many localities, as has already been proven, with good promise of success, the serious problem of checking or even eradicating a disease which renders many parts of the world almost uninhabitable by the Caucasian race and, even where less severe, hinders, as does no other disease, intellectual and industrial activities of the inhabitants. It is gratifying that one of our countrymen and a member of the Board of Directors of this Institute, Dr. Theobald Smith, by his investigations of Texas cattle fever, led the way in the discovery of the propagation of this class of diseases thru an insect host.

The deepest impress which has been made upon the average death rate of cities has been in the reduction of infant mortality thru a better understanding of its causes. The Rockefeller Institute, by the investigations which it has supported of the question of clean milk and of the causes of the summer diarrheas of infants, has already made important contributions to this subject, which have borne good fruit in this city and elsewhere.

No outcome of the modern science of bacteriology has made a more profound impression upon the medical profession and the public, or comes into closer relation to medical practice, than Behring's discovery of the treatment of diphtheria by antitoxic serum, whereby in the last twelve years the mortality from this disease has been reduced to nearly one-fifth of the former rate.

The most stupendous task to which the medical profession has ever put its hands is the crusade against tuberculosis, whose preëminence as the leading cause of death in all communities is already threatened. Sufficient knowledge of the causation and mode of spread of this disease has been gained within the last quarter of a century to bring within the possible

bounds of realization the hopes of even the most enthusiastic, but it will require a long time, much patience, and a combination of all the forces of society, medical, legislative, educational, philanthropic, sociological, to attain this goal.

Time forbids further rehearsal, even in this meager and fragmentary fashion, of the victories of preventive medicine. Enough has been said to make clear that man's power over disease has been greatly increased in these latter days. But great and rapid as the progress has been, it is small in comparison with what remains to be done. The new fields which have been opened, have been explored only in relatively small part. There still remain important infectious diseases whose secrets have not been unlocked. Even with some whose causative agents are known, notably pneumonia and other acute respiratory affections, and epidemic meningitis, very little has yet been achieved by way of prevention. The domain of artificial immunity and of the treatment of infections by specific sera and vaccines, so auspiciously opened by Pasteur and by Behring, is still full of difficult problems, the solution of which may be of immense service in the warfare against disease. Of the cause of cancer and other malignant tumors nothing is known, altho many workers with considerable resources at their disposal are engaged in its study. With the change in the incidence of disease, due at least in large part to the repression of the infections of early life, increased importance attaches to the study of the circulatory, renal, and nervous diseases of later life, of whose underlying causes we are very imperfectly informed. There are and will arise medical problems enough of supreme importance to inspire workers for generations to come and to make demands upon all available resources.

In directing attention, as I have done, to some of the practical results of scientific discovery in medicine, and in indicating certain of the important problems awaiting solution, there is always the danger of giving to those unfamiliar with the methods and history of such discovery a false impression of the way in which progress in scientific knowledge has been secured and is to be expected. The final victory is rarely the

result of an immediate and direct onslaught upon the position ultimately secured. The advance has been by many and devious and gradual steps, leading often, it might appear, in quite different directions, and mounted more frequently than not to secure a wider prospect, but without any thought of the final goal. The army contains a multitude of recruits drawn from the most various fields, the biologist, the chemist, the physiologist contributing their share to medical triumphs just as truly as the pathologist, the bacteriologist, the hygienist, the clinician. The inspiration has been the search for truth and joy in the search far more than any utilitarian motive. In the fullness of time comes the great achievement; the leader is hailed, but he stands upon the shoulders of a multitude of predecessors whose contributions to the result are often lost from view.

In full recognition of the dependence of success in the warfare with disease upon increase of knowledge, the Rockefeller Institute for Medical Research was founded by the enlightened munificence of Mr. John D. Rockefeller, to whom we make grateful acknowledgment. Likewise to the broad sympathies and active interest of his son, Mr. John D. Rockefeller, Jr., the origin and development of this Institute are largely indebted.

What has already been accomplished, as well as the general scope and aims of the Institute, have just been concisely indicated to you by Dr. Holt. My purpose has been to show, altho of necessity most inadequately, that these aims relate to matters of the highest significance to human society, that the present state of medical science and art requires large resources for its advancement, and that the returns in benefits to mankind have been and will continue to be great out of all proportion to the money expended.

May the hopes of the founder and of those who have planned this Institute be abundantly fulfilled! May it contribute largely to the advancement of knowledge, and may the streams of knowledge which flow from it be "for the healing of the nations"!

WILLIAM H. WELCH

II

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Compiled by James Ingersoll Wyer, Jr., Reference Librarian, New York State Library, and Mabel E. Leonard, New York State Library School

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Great Britain

- 286 **Barnicoat, C. A.** Imperial co-operation in education. (Monthly rev. Aug. 20, no. 2. p. 142-51.)
Presents the work and aims of the "League of the Empire," thru which colonial and English schools correspond, that the love of home and brotherly feeling may be increased thruout the British empire.
- 286a **Benson, A. C.** Public school education. (Monthly rev. Dec. 21, no. 3. p. 31-43.)
Raises the question whether school teaching in England need necessarily be so unproductive and dispiriting a business as it generally is, and then shows where the faults lie and suggests remedies.
- 287 **Boy at the public schools.** (Blackwood's, Jan. 177:38-51.)
Description of a boy's life and feelings at an English public school, written as if to dispell a mother's misgivings about sending him. A continuation of "On the choice of a public school" in Blackwood's, Dec., 1904. 176: 756-67.
- 288 **Confessions of a schoolmaster.** (Educ. rev. Dec. 30:433-41.) From the Upton letters, by T. B., p. 159-167.
A spicy article about English school life and methods, especially in reference to the classics and the definite type of boy developed.
- 289 **Hereford, Lord bishop of.** Educational problems. (Pop. sci. mo. Jan. 66:273-78.)
An English view concerning the best place for boys from 14 to 19 years of age, and the influence of universities upon school education thru their requirements for admission and their bestowal of endowments.
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The first 336 pages are devoted to information about 115 schools. Then follow chapters on how to prepare for the various professions; a brief but useful bibliography of many of the schools; a list of the year's educational books; a brief list of public schools for girls and a complete index.
- 291 **Paton, J. L.** English public schools. 44 p. D. G. Allen, 6p. net.
- 292 **Thompson, N. A.** The education at our public schools. (Westminster rev. June. 163:597-607.)
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- 293 *Dulwich*. **Gilkes, A. H.** A day at Dulwich. 124 p. S. Longmans, 50c.

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- 294 *Durham*. **The pedigree of Durham school.** (*Jour. of educ.* Oct. 37: 707-9.)

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- 295 *Westminster*. **Leach, A. F.** The origin of Westminster school. (*Jour. of educ.* Jan. 36: 79-81.)

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- 296 **Horwill, H. W.** Private secondary schools in America. (*Jour. of educ.* Sept. 37: 637-38.)

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All discussions of special subjects are here, whether they concern university, college, special school, secondary school or elementary school, except as they concern college entrance examinations. For those, see 378.01.

- 297 **Brown, J. S.** Present development of secondary schools according to the proposed plan. (*School rev.* Jan. 13: 15-18.)

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- 298 **Courses of study in German schools.** (In U. S.—Education, Comm'r of. Report for 1903. 2: 1217-42.)

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- 299 **Draper, A. S.** The public school programmes. (*Outlook*, July. 80: 779-82.)

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- 300 **Hartwell, C. S.** Economy in education. (*Educ. rev.* Sept. 30: 159-77.)

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- 301 **Graves, F. P.** Enrichment of the public school curriculum. (*Educ.* Mar. 25: 387-95.)

An outline of conditions which lead to the idea of enrichment, and a view of present efforts, their good and bad results.

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From the idea that unity is the aim in choosing studies, the author seeks to discover which subject should be the main one about which education should be built.

- 303 **Lawton, C. E.** Relations between the grammar and high schools as to courses of study and methods of teaching. (Educ. Oct. 26:103-9.)
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- 305 **Lodge, Oliver.** School teaching and school reform: a course of four lectures on school curricula and methods delivered to secondary teachers and teachers in training at Birmingham during February, 1905. 171 p. O. Williams and Norgate, 3s.

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- 309 **Payne, B. R.** Public elementary school curricula; a comparative study of representative cities of the United States, England, Germany and France. 200 p. O. Silver, Burdett, \$1.

A comparative study of the subjects included in the elementary schools of typical cities of England, France, Germany and the United States, of the time allotment of these subjects and their organization into school programs. The volume contains a mass of information, the result of much labor but not well digested. Nevertheless, such presentation of actual conditions is a great advance towards a truer appreciation of the problems of our public education. Notwithstanding many crudities, the book is a valuable one to those who desire to get at the actual facts concerning what is studied by our school children, and what relative value is assigned to these subjects. Bookman.

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Papers by Martin G. Brumbaugh, Louise H. Haeseler and James G. Crosswell, with a general discussion also.
- 312 **Yoxall, J. H., and Gray, Ernest.** The companion to the N. U. T. code, 1905; containing suggestions for the consideration of teachers and others concerned in the work of public elementary schools, 1905. 254 p. O. Educ. Supply Assoc., 1s. net.
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- 313 **Foster, W. T.** The elective system in public high schools. (School rev. Feb. 13: 150-58; Mar. 13: 243-62.)
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- 315 **Burton, E. De W.** What should the churches demand of the theological schools? Biblical world, Jan. 25: 20-30.)
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- 317 **Harper, W. R.** Shall the theological curriculum be modified, and how? (In his Trend in higher education. University of Chic. press, \$1.50. p. 234-67.)
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375.4 *Language in the curriculum*

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- 322 Junod, H. A. Native language and native education. 115 p. (In *Journal of the African soc.* Oct.)
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Every science teacher should know *School science and mathematics*, a journal now in its fifth year, which is especially concerned with science teaching in Secondary schools.

See also N. E. A. Proc. p. 781-825 for Proceedings of Dep't of science instruction.

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Emphasizes necessity of right use of words for proper comprehension of scientific meanings, illustrating with words and methods misused.

375.507 *Nature study*

For material on school gardens see nos. 377, 379, 381, 386.

- 325 **British association for the advancement of science.** Studies suitable for elementary schools. Report of the committee. (In B. A. Report, 1904. p. 352-60.)

Deals with Nature study work. Discusses the conditions necessary for its study, discipline, course of study, &c., with statement of four serious defects in its teaching as now conducted.

- 326 **Guyer, M. F.** The question of method in nature study. (Ped. sem. Mar. 12: 86-92.)

A method of teaching suggested and typical outlines given for the study of a plant and an animal.

- 327 **Jackson, W. S.** Nature study and religion. (Educ. rev. June. 30: 12-30.)

An attempt to show how the two are woven together, and one helps the other.

- 328 **Long, C. R.** The aim and method of nature study. O. Macmillan, 1s.

- 329 **McMurry, L. B.** Nature study lessons for primary grades. 191 p. D. Macmillan, 60c.

Consists of two parts; animal life, with 19 types, plant life, with 10 types. The book is of the chatter variety, question and answer: "Now look at this hen and tell me what you *like* about her looks. (Her features are pretty.) What do you admire about her feathers? What else do you think is pretty about the hen? (She wears a pretty red comb on top of her head.) How do you like the looks of the little chicks? (They are cunning.)" p. 83. Such, *ad infinitum*, with no hints for teaching, methods, &c. Would this be language as well as nature study?

- 330 **Nature study review;** devoted to all phases of nature study in schools. M. A. Bigelow, Teachers college, Columbia Univ.. \$1 per year.

First issued in Jan., 1905, during which year 6 numbers appeared, forming volume one. The editors are Liberty Hyde Bailey; Clifton F. Hodge; H. W. Fairbanks; J. F. Woodhull; M. A. Bigelow.

- 331 **Ussher, Mrs. Beverley, and Jebb, Dorothy.** Observation lessons on plant life; a guide to the teacher. Newmann.

Nature study lessons designed to set the class thinking. Shows how nature study is carried on in the English schools. "It has high intrinsic merit, and as an introduction to the more formal study of botany, it should prove most valuable." Jour. of educ.

375.51 *Mathematics*

Every teacher of mathematics should know the journal *School science and mathematics*, now in its fifth year.

- 332 **Collins, J. V.** Economies in algebra. (School rev. Apr. 13: 324-30.)

Expedients for economizing the labor of pupil and teacher, and getting better results from the study.

- 333 **Evans, G. W.** The measurement theorems in geometry. (School rev. Apr. 13: 307-14.)

Suggestions how they should be taught.

- 334 **McMurry, C. A.** Special method in arithmetic. 225 p. D. Macmillan, 70c. (Special methods ser. v. 6.)

Aims "to make plain to teachers in elementary schools the purpose of teaching arithmetic, to outline fully a course of study based upon this

controlling idea, and to discuss and illustrate the method of handling some of the chief topics." Preface.

- 335 **Metzler, W. H.** The educational value of mathematics. (Jour. of ped. June. 17: 277-87.)

Read at the Easter meeting of the Association of mathematics teachers for the Middle states and Maryland.

A statement of the qualities of mind and heart necessary to every educated person, and an explanation of how the study of mathematics develops all these powers.

- 336 **Millis, C. T.** Arithmetic and geometry; a scheme for teachers and a plea for educational reform. 32 p. O. Educational supply assoc. 9d. net.

A statement of the difficulties in fitting the work of a lower to a higher school, and the scheme, outlined in full, for the correlation of arithmetic with geometry, which the author hopes will obviate these in the subject of mathematics.

- 337 **Sykes, Mabel.** Radical and conservative elements in the teaching of mathematics. (School rev. Jan. 13: 59-69.)

Read at the 18th Educational Conference, Department of Mathematics, held Nov., 1904, at the University of Chicago.

A presentation of some ideas as to how mathematics should be taught.

- 338 **Taylor, A. R.** Suggestions for modifications in the order and time of presenting algebra. (School rev. Apr. 13: 331-36.)

375.54 *Physical sciences in the curriculum*

- 339 **Macnair, D. S.** Chemical laboratories for schools. G. Bell.

"This useful little book, scarcely more than twenty papers, is intended to give hints to teachers as to the method of planning and fitting up a school laboratory and of conducting a school course in chemistry." Jour. of Educ.

A helpful plan for twenty pupils, with excellent advice as to procedure of lessons. Contains a useful list of apparatus, with prices.

- 340 **Physics and chemistry conference.** (In Michigan schoolmasters' club. Proceedings at the fortieth meeting held in Ann Arbor, 1905. p. 15-65.)

Short papers upon various topics in physics and chemistry.

- 341 **Sheard, Charles.** Some points in the teaching of physics and chemistry. (Educ. Oct. 26: 97-102.)

- 342 **Tower, W. B.** What amount of mechanics is it desirable to introduce into a first-year course in Physics, and in what position should it come? (School rev. Jan. 13: 69-72.)

Read at the 18th Educational Conference, Department of Physics, held Nov., 1904, at the University of Chicago.

375.57 *Biological sciences in the curriculum*

- 343 **Biological conference and science teaching.** (In Michigan schoolmasters' club. Proceedings at the fortieth meeting held in Ann Arbor, 1905. p. 65-83.)

Contains short papers upon this subject.

- 344 **Hahn, C. W.** The method and scope of a year's course in biology for the first year in high school. (Educ. Nov. 26: 154-60.)

- 345 **Hargitt, C. W.** The place and function of biology in secondary education. *Educ. Apr.* 25: 475-87.)

An able presentation of certain needs in our educational system and of how they may be supplied by the study of Biology.

Read before the New York science teachers' association.

- 346 **Hodge, C. F.** Dynamic biology in the college course. (*Ped. sem. June.* 12: 158-74.)

A criticism of the Huxley Martin plan of teaching biology and a description of how it is taught at Clark university.

- 347 **Smallwood, M. W.** Biology as a culture study. (*Jour. of ped. Mar.* 17: 231-39.)

Defining culture as openness of mind, the author shows how a study of biology increases this attribute.

375.6 *Technical and industrial education; engineering*

See also section 371.42 and no. 108.

- 348 **Arnett, L. D.** Educational outlook based on occupations. (*Ped. sem. Sept.* 12: 334-38.)

A statistical study based upon the last U. S. Census returns and dealing with the industrial aspect as it may be related to future education. A study of occupations, which may help educators to decide on the proper kind of education for the child.

- 349 **Bashford, J. L.** Technical education in Germany. (*Fortn. rev. Oct.* 84: 692-707.)

Conditions and requirements in German institutions considered in the light of England's need of some such system.

- 350 **Casartelli, L. C.** Industrial education in Catholic missions. (*In Great Britain—Education, Board of. Special reports on educational subjects. v. 14, p. 251-320.*)

A compilation from various workers in the missionary fields presenting the condition of industrial education among the natives as carried on by Catholic missions. Various parts of Africa, India, Ceylon, North Borneo and America are treated. A table presents in tabular form, a view of Catholic missions, giving for each, the Vicariate or Prefecture, missionary society, Headquarters and any remarks necessary to be made.

- 351 **Creasey, C. H.** Technical education in evening schools. 309 p. D. Sonnenschein, 3s. 6d. net.

"A book which should serve an excellent purpose by showing the possibilities of evening education, and by indicating the reforms which are desirable. Mr. Creasey writes with first-hand knowledge and wide experience." *Schoolmasters' Yearbook.*

Outlines courses of study as well as discusses methods. Deals entirely with English conditions.

- 352 **Denning, A. du P.** An amended scheme for the London Charlottenburg. (*Jour. of educ. Sept.* 37: 588-90.)

An outline of the scheme for giving technical education, what it can accomplish, and in what way. See also the April no. v. 36, p. 529-30.

- 353 **Douglas, W. L.** Trade schools and their value. (*Independent, Apr.* 58: 815-17.)

Shows America's need for them, and the good resulting from skilled labor gained thru training.

- 354 **Hanus, P. H.** Technical continuation schools of Munich. (School rev. Nov. 13: 678-83.)
 A reprint from the Boston Transcript, in October, 1905.
 A brief history and description of a unique school system where those who must leave school at thirteen or fourteen years are well trained for the several callings on which they enter.
- 355 **Howe, H. M.** The organization of higher technical education. (In Association of American universities. Journal of proceedings and addresses of the sixth annual conference, 1905. p. 16-32.)
 A discussion of, and an affirmative answer to the questions: "Will technical schools serve the interests of the community better if they are parts of great universities, or if they are isolated. Is association or isolation more to the public good?" given by a member of the Columbia university faculty, and by other prominent educators.
- 356 **Institution of civil engineers.** Report on engineering education by a committee of the Institution.
 A contribution of marked value, tho naturally more applicable to professional conditions in Great Britain than in America.
 While American engineers will probably feel that in the insistence on actual shop-work as part of professional training the report is ultra-conservative yet it is worth careful study by every one interested in engineering education in the U. S. It is reviewed at some length in Engineering record, 53: 637-38 for May 26, 1906.
- 357 **Levetus, A. S.** The craft schools of Austria. (Intern. studio, Sept. 26: 201-19.)
 A description of various "Fachschulen"; the system, its aims, methods and results. Illustrated by students' work.
- 358 **Marx, C. D.** General education for engineers. (Pop. sci. mo. Sept. 67: 442-46.)
 Discussion as to the necessity for broad, general culture.
- 359 **Meyer, E. C.** Industrial education and industrial conditions in Germany. 323 p. O. Government printing office, Wash. paper, 25c. (U. S.—Commerce and labor, Dep't. of. Bureau of statistics. Special consular reports, v. 33.)
 A series of papers treating exhaustively the German system of industrial education and the various schools in the various trades or professions. For each school, as far as possible, the author gives the origin and nature of the schools of that class or place, the requirements for entrance, the courses, teachers and attendance, time of instruction, income and expenditures, tuition fees, curriculums, &c. Where possible, statistics are given. Part 2 is concerned largely with industrial conditions in different places in different circumstances, tho p. 264-79 discuss general and technical education in Germany. The appendices describe schools in France, Zittau, Japan and London. Pages 145-47 give quite a full bibliography. The author is United States Deputy Consul, Chemnitz, Germany.
- 360 **Monaghan, J. C.** Industrial education in Germany. (Catholic world, Jan. 80: 442-52; Mar. 80: 799-806; July, 81: 476-82.)
 American education and the Mosely commission. 80: 442-52. A criticism, and a comparison of America with other countries.
 Industrial education in Germany. 80: 799-806. A broad description of Germany's system, based on Ernest C. Meyer's book bearing this title. Vol. 81: 476-82 is based on Mr. Mason's report. The keynote of Mr. Monaghan's remarks is America's need for reform.
- 361 **National Educational association—Committee on industrial education in schools for rural communities.** Report to the National council of education. 97 p. O. Irwin Shepard, Winona, Minn., 10c.

- 362 **Society for the promotion of engineering education.** Proceedings of the thirteenth annual meeting held in Atlantic City, N. J., June 28 and 29, 1905. 324 p. O. Eng. news pub co., N. Y. city, \$2.50.
Indispensable annual volume for all who wish to follow engineering education. The most important papers not strictly technical seem to be the president's address on American mining schools, by Fred W. McNair; Progress and influence of technical education, by Victor C. Alderson and a careful report by the committee on Requirements for graduation.
- 363 **Technical education for women and girls at home and abroad.** 64 p O. Woman's industrial council, 3d.
- 364 **Vanderlip, F. A.** The economic importance of trade schools. (In N. E. A. Proc. p. 141-45.)
With the German schools as a text, the author shows the good results derived from, and the need for, trade schools.
- 365 **Williams, A. S.** A technical school in Naples. (School rev. May, 13: 398-410.)
A description of the aims and work of the "Scuola Femminile Professionale e di Arti Regina Margherita," a technical school for girls.
- 375.61 *Medical education*
- 366 **Allbutt, T. C.** Medical education in London. (Lancet, Oct. 2. p. 1081-86.) Published also in British med. jour. Oct., 1905. p. 913-18.
Discusses education and instruction, the functions of a university, the arrangement of a medical curriculum, the examination question: the one portal system, the outlook of modern medicine, and moral and mental union. Not confined to London.
- 367 **Blake, C. J.** Collaboration in medical education. (Maryland med. jour. Sept. 48: 349-59.)
Address delivered to the medical and chirurgical faculty of Maryland at its annual meeting, Baltimore, Apr. 26, 1905.
An historical view of medical education, and an exposition of its present status in its need for, and development of, collaboration.
- 368 **Dodson, J. M.** The research idea and methods in medical education and practice. 19 p. O. Press of the Amer. medical association, Chic. n. p.
Reprints from the Journal of the American Medical Association, July 8, 1905.
An unflattering sketch of the medical conditions in America, and suggestions for bettering them, chief of which is the requiring of research work and more severe entrance examinations.
- 369 **Egbert, Seneca.** The teaching of hygiene in colleges and normal schools. (American public health association. Public health. v. 30, p. 143-52.)
A statistical view of the extent to which it is taught in various colleges, and emphasis upon the greater need of training in this subject.
- 370 **International dental congress.** Proceedings of fourth congress, St. Louis, Mo., Aug. 29-Sept. 3, 1904. (Dental cosmos, Oct. 47: 1219-44.)
Historical annotations, and the present condition of dental education in the capital of the republic of Mexico, by José J. Rojo. Includes historic and prehistoric times.
A review of interstate and international dental legislation, showing requirements for practice.

- 371 **Medical schools of the United States.** (Jour. Amer. med. ass'n. Aug. 45:551-71.)
 Arranged by states. Gives a brief description of every college legally chartered to confer the degree of doctor of medicine and whose diploma is recognized by at least one state licensing board. Includes sectarian as well as regular colleges, and also tables of statistics.
- 372 **Morse, J. L.** The teaching of pediatrics. (Jour. Amer. med. ass'n. Aug. 45:507-10.)
 Delivered at the 56th annual session of the American medical association, Portland, Ore., July 11-14, 1905.
 An outline of the medical course given at Harvard and of the teaching of pediatrics there.
- 373 **Smith, Theobald.** Medical research: its place in the university medical school. (Pop. sci. mo. Mar. 66:515-30.)
 What has been done for research work in medical colleges and suggestions for meeting present needs and future lines of development.
- 374 **Waldo, Frank.** The Harvard medical school. (Pop. sci. mo. May. 67:35-41.)
 A brief account of the work of the school and its equipment.

375.63 *Agricultural education*

Publication 807 from the U. S. office of experiment stations gives an 8 p. list of titles on agricultural education.

- 375 **Association of American agricultural colleges and experiment stations.** Proceedings of the eighteenth annual convention held at Des Moines, Iowa, Nov. 1-3, 1904. 138 p. O. U. S. gov't. (U. S.—Experiment stations, office of, Bulletin 153.)
 W. O. Thompson. Some problems in the colleges of agriculture and mechanic arts. p. 33-42. Report of committee on methods of teaching agriculture. p. 43-56. Deals with the teaching of agriculture in rural common schools. A topical and slightly statistical treatment, and gives a syllabus of an elementary course in agriculture.
 K. L. Butterfield. The social phase of agricultural education. p. 56-61.
 W. O. Thompson. How far should or may land-grant colleges engage in teaching elementary subjects not generally recognized as belonging to the college curriculum? With paper and discussion, p. 79-91.
 M. H. Buckham. Military instruction. With discussion, p. 91-101. On the intent and purpose of the Morrill Act with regard to military instruction.
 G. A. Harter. What degrees should be given for the completion of undergraduate courses in land-grant colleges? With discussion, p. 101-6.
 J. L. Snyder. What can and should be done to increase the interest in and appreciation for the agricultural side of technical education? With discussion, p. 106-16.
- 376 **Bathurst, Charles, and Medd, J. C.** ed. Report of the Conference on agricultural education held at Gloucester, on Oct. 15, 1904. 220 p. O. Gloucester (Eng.) Educ. com. 3d.
 Various aspects of agricultural education presented in addresses by men representing both agricultural and educational interests. Speakers and topics are English and the substance of the addresses has been severely criticised as academic, impractical and too little pertinent to actual conditions. See a contemptuous arraignment of this meeting by E. Verney in *Independent review*, May, 1905, 6: 38-46.
- 377 **Bennett, H. C.** The school garden; a new method of nature study. (Booklover's mag. Apr. 5: 469-78.)
 A brief history of the movement, a description of what was done in Phila-

delphia and a statement of the advantages and good resulting from work along this line.

- 378 **Butterfield, K. L.** The social phase of agricultural education. (Pop. sci. mo. Aug. 67: 353-62.)

Read Nov. 2, at the convention of the Association of American agricultural colleges and experiment stations, Des Moines, Iowa.

From the point of view of the agricultural college. A presentation of the "rural problems," and of the ways in which the agricultural college may fulfill its function by helping to solve them.

- 379 **Davis, B. M.** School gardens for California schools; a manual for teachers. 79 p. O. State normal school, Chico, Cal., 50c. (Publications of the State normal school, Chico, Cal., Bulletin no. 1.)

"An attempt to put the California teachers who wish to undertake school gardening in possession of what the writer has found useful in his own experience. It is the product of several years' study and experiment in connection with his work at the Los Angeles and Chico State Normal Schools. The subject covers such a wide field that it has been necessary to treat each phase in the briefest manner consistent with clearness." Preface.

Suggestive and practical, and, except in the matter of specific detail, useful to anyone interested in the subject. Illustrated, and also contains charts giving a plant calendar and a correlation chart for garden work. The references add greatly to its general usefulness.

CONTENTS: Introduction (history of movement).—The plant and its relations.—Plant propagation.—Instruction.—Adaptation to school conditions. School gardens of Los Angeles and Chico State Normal Schools.—Useful reference books, bulletins, &c.—References on common insects of California.—Bibliography.

- 380 **Davis, K. C.** County schools of agriculture in Wisconsin. (In U. S.—Agriculture, Dep't. of. Annual report of the Office of experiment stations for year ending June 30, 1904. p. 677-86.)

A study of these schools after two years of successful operation, with reference to their equipment, grounds, buildings, character, methods and facilities for instruction, attitude of the students and correlative work.

- 381 **Galloway, B. T.** School gardens; a report upon some co-operative work with the normal schools of Washington, with notes on school garden methods followed in other American cities. 47 p. O. Government printing office, Wash. (U. S.—Agriculture, Dep't. of. Office of Experiment stations. Bulletin no. 160.)

A statement of what has been done and the means employed. Each city studied is treated separately.

- 382 **General laws relating to agricultural and mechanical land grant colleges.** (In U. S.—Education, Comm'r of. Report for 1903. 1: 39-226.)

A continuation and completion of the compilation appearing in the commissioner's Report of 1902. p. 1-90. Contains the laws of 32 states and territories having colleges established under acts of Congress, approved July 2, 1862, and Aug. 30, 1890.

- 383 **Hamilton, John.** Agricultural instruction for adults in the British empire. 96 p. O. Wash., government printing office. (U. S.—Experiment stations, Office of. Bulletin 155.)

Results of investigation respecting methods adopted by various governments included in the British empire in the dissemination of agricultural information among their rural populations.

- 384 **Hays, W. M.** Agricultural education in high schools. (In U. S.—
Education, Comm'r of. Report for 1903. 2: 1368-72.)
Read at the 40th annual session of the Minnesota educational association,
Dec. 31, 1902-Jan. 2, 1903.
Need for instruction presented and the best means of gaining it.
- 385 **M'Clure, D. E.** Phases of modern education: II. Education of coun-
try children for the farm. (Educ. Oct. 26: 65-70.)
An indefinite discussion, with some statements of what has been done for
farming communities.
- 386 **Miller P. K.** School gardens in their relation to the three R's.
(Educ. May. 25: 531-42.)
A report of work done by children of third and fourth grades in their
gardens at Riverside Park, Baltimore, Md. The purpose is to show the
relation between studies usually accepted as general school work, and
garden work; or, to show that garden work, carried on intelligently,
necessitates a thoro teaching of the three R's. Introduction.
- 387 **Reade, Hubert.** An agricultural college in Japan. (Westminster
rev. May. 163: 502-8.)
Description of what is done at the Agricultural institute of Sapporo.
- 388 **Spender, Hugh.** Lady Warwick's farming college for girls. (Cen-
tury, Aug. 70: 548-53.)
Describes plan and method of teaching girls to earn their living in light ag-
ricultural industries.
- 389 **True, A. C.** Progress in agricultural education, 1904. (In U. S.—
Agriculture, Dep't. of. Annual report of the Office of experiment
stations, for 1904. p. 575-616.)
A view of work done by the experiment stations; the growth, financial stand-
ing, courses of study and buildings for agricultural colleges; and various
topics of interest in agricultural education in other grades of schools.
- 390 ——— The teaching of agriculture in the public schools of the south.
(In Conference for education in the south. Proceedings of the
eighth annual conference, 1905. p. 57-68.)
The author is Director of the U. S. Office of experimental stations.
A sketch of general agricultural conditions, of the tendencies in educa-
tion, especially on the agricultural side, statements of the way experi-
ence shows that agricultural education should be organized, and general
observations urging the introduction into the common schools of agricul-
ture, as a subject to be taught.

375.64 *Domestic science*

- 391 **Ravenhill, Alice.** The teaching of "Domestic science" in the
United States of America. (In Great Britain—Education, Board of.
Special reports on educational subjects. v. 15.)
The report was prepared by the author as a result of an investigation made
by her at the joint request of the Board of Education, the West Riding
county council and the Royal sanitary institute. Except for the index,
the paper was ready for publication in June, 1903, but it seemed best to
delay its publication for a while.
It is a thoro, scientific, comprehensive and detailed treatment of the
subject. About all phases of domestic science taught in America are dis-
cussed as to their value, manner of treatment and what is being done in
special places. The subject is taken up from the view-point of the age of
the students; for instance, domestic science in the kindergarten, in the
primary schools, high schools, colleges, technical institutions, &c., thus

presenting a possibility of comparison. The many tables of schedules, of study, statistics and plans of buildings add greatly to the practical value of the work. Appendices give tables stating exactly what equipment is necessary for various kinds of work and giving prices in English currency. They also give outlines of lecture courses in various subjects, for different years, and in different institutions. A bibliography and a full index is also included.

CONTENTS: Part 1, State institutions.—Part 2, Private institutions.—Part 3, Social agencies for the promotion of domestic science teaching. Appendices.

- 392 **Richards, E. H.** The present status and future development of domestic science courses in the high school. (In National society for the scientific study of education. Fourth year book. pt. 2. p. 39-52.)

A study of the conditions into which one would have to introduce domestic science courses, an outline of such a course and the results one might expect from it.

375.65 *Commercial education*

See also papers printed in N. E. A. Proc. p. 669-705 under the Department of business education.

- 393 **Brown, J. S.** The place of commercial work in the High school course of study. (In National society for the scientific study of education. Fourth year-book, pt. 2. p. 9-17.)

A brief discussion of the subject from the historical, educational and practical standpoint.

- 394 **Carpenter, F. O.** Phases of modern education; IV. Industrial and commercial training in public schools. (Educ. Dec. 26: 191-202.)

Tells what industrial and commercial training is and how it can best be given.

- 395 **Kreemer, S. I.** Writing. (Educ. May. 25: 545-52.)

An investigation, and conclusions drawn therefrom, based upon three sets of questions sent to primary and high school teachers and to business men, to discover which system of writing is the best, the most preferred and the quickest to use.

- 396 **Scott, W. A.** The education of business men. (World to-day, Aug. 878-82.)

Some features out of which grew the business courses in colleges; also their purposes and requirements.

375.7 *Art education*

See also papers printed in the N. E. A. Proc. p. 591-625 under the Department of art education.

- 397 **Brad, C.** Drawing in preparatory schools. (Educ. Sept. 26: 47-51.)

Suggestions and an outline of the scheme followed by the Armour Scientific Academy.

- 398 **Brown, H. H.** Appearance drawing in the high school. (School rev. Sept. 13: 531-38.)

An account of how drawing has been, and now is, taught.

- 399 **Coburn, F. W.** Composition as the basis of art instruction. (Educ. Oct. 26: 80-86.)

How it affects instruction in elementary and secondary schools.

- 400 **Freohlich, H. B.** Design and crafts in the high school. (School rev. Sept. 13: 521-30.)
Read before the Eastern Art teachers' association, at Trenton, N. J., May 5, 1905.
A presentation of how art and manual training are taught in high schools.
- 401 **Haney, J. P.** The arts in theory; a statement of ideals. (Educ. Nov. 26: 161-67.)
Address delivered before the Eastern Art Teachers' Association, Trenton, 1905.
A relation of arts with other studies insisted on, working towards the ideal of a child's training, not a finished artistic product made by him.
- 402 **Münsterberg, Hugo.** Principles of art education; a philosophical, æsthetical and psychological discussion of art education. 114 p. D. Prang, \$1.
- 403 **Van der Veer, L.** Art student life in Munich. (Intern. studio. Mar. 25: 16-29.)
A description of their life, work, customs and privileges.

375.78 *Musical education*

- See also papers printed in the N. E. A. Proc. p. 627-68 under the Department of music education.
- 404 **Hanchett, H. G.** College and university work in music. (Educ. Feb. 25: 345-53.)
A plea for the teaching of music in colleges and suggestions as to the kind and method of instruction.
- 405 **Jenkins, C. W.** How children may be trained to express thought in music language. (Overland mo. Aug. 61 (ser. 2, 46) : 176-80.)
Shows how children may be taught to compose music for words.
- 406 **Jepson, B.** Music in public schools. (Educ. Mar. 25: 401-11.)
The author has been vocal instructor in the public schools of New Haven since Jan., 1865. He describes his methods of teaching music, dividing the subject by school years.
- 407 **Mighels, P. V.** A music-school settlement. (Harper's mo. Nov. 111: 832-41.)
An account of the "Society of the music school settlement" and its school of music for the East Side poor in New York city.

375.82 *English language and literature in the curriculum*

- 408 **Bailey, F. C.** Fossilization among teachers of English; a plea against pedagogism. (School rev. Nov. 13: 712-16.)
- 409 **Boggs, L. P.** How children learn to read: an experimental study. (Ped. sem. Dec. 12: 496-502.)
Methods discussed, and experiments recorded.
- 410 **Cabell, E. D.** An aspect of the work of the teacher of English. (School rev. Sept. 13: 560-66.)
The gaining of the deepest appreciation of good literature.
- 411 **Hall, G. S.** What children do read and what they ought to read. (Jour. of ped. Sept. 18: 46-51.)
Suggestions as to subjects.

- 412 **McConkey, B. M.** Literature in elementary schools. (Jour. of ped. Mar. 17: 225-30.)
A discussion of the kind of literature now read by children in schools.
- 413 **McMurry, C. A.** Special method in language in the eight grades. 192 p. D. Macmillan, 70c. (Special methods ser. v. 7.)
"Designed for elementary teachers and aims to give a broad and simple treatment of the language problem below the high school." Preface.
Includes theory, explanations and directions, also type lessons. For teachers not pupils.
- 414 **Miner, L. B.** Voluntary reading in the English high school. (School rev. Feb. 13: 180-88.)
A description of what is being done in the Providence English high school.
- 415 **Noyes, E. C.** Class criticism as a means of teaching English composition. (School rev. Nov. 13: 696-701.)
Definite directions based on experience.
- 416 **Ringwalt, R. C.** The teaching of speaking in colleges. (Educ. rev. Mar. 29: 294-302.)
Aims "to sketch briefly the place of speaking in the college curriculum and to suggest why considerably more attention should be paid to it; also to point out two or three facts which have helped to bring out the haphazard situation now existing." A program of the essentials of such a course is appended.
- 417 **Shackford, M. H.** On teaching elementary English. (Educ. rev. Oct. 30: 303-9.)
Helpful suggestions.
- 418 **Symmes, Frances.** The English teacher and the spelling question. (School rev. Jan. 13: 42-51.)
Read at the 18th Educational Conference, Department of English, held Nov., 1904, at the University of Chicago.
A study of present methods and results in teaching spelling, what the present poor spelling means and how the English teacher should handle the problem.
- 419 **Thurber, Samuel.** Voluntary reading in the classical high school; from the pupil's point of view. (School rev. Feb. 13: 168-79.)
Read at the meeting of the Association of New England Teachers of English, Nov., 1904.
An exposition of the conditions which make a relation between the pupil's voluntary reading and that required in English study impossible, and a description of the writer's own method of teaching English which was found successful.
- 420 **Trent, W. P.** Teaching literature. (In his Greatness in literature, and other papers. Crowell, \$1.20 net. p. 147-84.)
Suggestive as to methods. The writer believes less of the critical tone should be used, and more of the cultural pleasure-giving side of the study emphasized.
- 421 **Venable, Emerson.** Oral reading as an aid in the interpretation of literature in the high school. (School rev. Apr. 13: 337-41.)
- 422 **Wilson, Richard.** *Lingua Materna*: chapters on the school teaching of English. 208 p. O. E. Arnold, 3s. 6p.
- 375.84 *Modern languages in the curriculum*
- 423 **Chamberlin, W. A.** The comparative study of words in foreign languages. (School rev. Apr. 13: 315-23.)
Advocates a study of language by a comparative study of the roots of words.

- 424 **Crane, T. F.** The modern languages in secondary schools and colleges. (In Association of colleges and preparatory schools of the middle states and Maryland. Proceedings of the eighteenth annual convention held at Princeton University, 1904. p. 23-30.)
A resumé of the external and internal history of the study of the modern languages, during the past forty years, and a discussion of the point of contact between the schools and the colleges.
- 425 **Eve, H. W.** The teaching of modern languages. 31 p. O. D. Nutt. Republished from Murray's National education—a symposium. The pamphlet is most opportune, and is very good reading, being well expressed and enlivened with not a few flashes of wit. Modern languages as educative instruments, are contrasted with the classics, and the German method of teaching, known as the "Neuere Richtung" is discussed, its advantages and disadvantages being shown.
- 426 **Gohdes, W. H.** Modern language instruction in secondary schools. (In Schoolmasters' association of New York and vicinity. Twelfth annual report, 1904-05. p. 43-65.)
The author, a member of the Horace Mann High school faculty, tells his own experience in learning a language, points out the defects in modern methods of teaching, and suggests what he considers the best way to impart knowledge. The question is also discussed by other educators.
- 427 **Jenkins, T. A.** A brief for French in the High school. (School rev. Jan. 13: 77-83.)
Read at the annual conference of teachers of romance languages in colleges and schools in relations with the University of Chicago.
Reasons for its study given.
- 428 **Kern, P. O.** The question of translation in the teaching of modern languages. (School rev. Apr. 13: 293-306.)
A presentation and discussion of the three methods of teaching modern languages, with suggestions for a best way.
- 429 **Modern language conference.** (In Michigan schoolmasters' club. Proceedings at the fortieth meeting held in Ann Arbor, 1905. p. 101-16.)
Contains papers by A. E. Rothman upon the Essentials of German composition, and by Prof. J. E. Lautner upon The question and answer in modern language instruction.
- 430 **Perman, A. J.** Studying modern languages "properly." Jour. of educ. Apr. 36: 255-57.)
A picture of the perplexities of a teacher of French among the old and new methods of teaching it.
- 431 **Sachs, Julius.** The modern languages in secondary schools and colleges. (In Association of colleges and preparatory schools of the middle states and Maryland. Proceedings of the eighteenth annual convention held at Princeton university, 1904. p. 9-23.)
A criticism of present educational methods, an enunciation of the fundamental principles governing the teaching of language and suggestions for future use by teachers.
Published also in Educational review, Feb. 29: 163-78.
- 432 **Some notes** on the teaching of modern languages in French *Lycées* for girls. (Jour. of educ. Nov. 37: 740-42.)
Methods employed and results obtained in a large school of over five hundred pupils.

- 433 **Thiergen, Oscar.** The teaching of German in German middle-class schools—gymnasiums, realgymnasiums and oberrealschulen. (School rev. Nov. 13: 684-88.)

A description of the aim of the study, and an outline of course of study.

- 434 **Vreeland, W. V.** The modern languages in secondary schools and colleges. (In Association of colleges and preparatory schools of the middle states and Maryland. Proceedings of the eighteenth annual convention held at Princeton university, 1904. p. 30-40.)

A discussion of the mental training gained by a study of the languages.

375.88 *Classics in the curriculum*

- 435 **Ashmore, S. G.** The classics and modern training; a series of addresses suggestive of the value of classical studies to education. 159 p. D. Putnam, \$1.25.

CONTENTS: A plea for the classics in our schools, with particular reference to Latin.—Our classical inheritance.—The tragedy and comedy of the Greeks.—Classical archæology.—The Olympic games at Athens in 1896.

The first chapter bears directly upon the educational arguments. These are drawn largely from the psychology of language study, are unhackneyed, interesting and presented with admirable temper and earnestness.

- 436 **Benson, A. C.** A classical education. (Macmillan, Aug. 92: 303-8.)

The reasons for and against.

- 437 **Bishop, J. R.** Do Latin and Greek need something done for them in the high schools? (School rev. Nov. 13: 689-95.)

- 438 **Clapp, E. B.** On reading Greek. (Educ. rev. Oct. 30: 243-49.)

A presentation of the difficulties,—and of the means to surmount them,—in the way of one wishing to continue the reading of Greek.

- 439 **Classical association of England and Wales.** Proceedings, 1905; with rules and list of members. 13 p. O. J. Murray, 2s. 6p. net.

This is the second volume of Proceedings. It also includes the papers read at the meetings, and discussions upon them.

- 440 **Conradi, Edward.** Latin in the high school. (Ped. sem. Mar. 12: 1-26.)

A study of the value of Latin to students and for gaining a knowledge of the English language. Tests of students' knowledge were made and the results are tabulated. Includes also a bibliography.

- 441 **Darrin, Katharine.** A plea for 'Cæsar. (Educ. rev. Feb. 29: 185-90.)

Aims to show how the study of Cæsar can be made interesting by treating it as a story, or history, not merely as a text to be translated.

- 441a **Gardner, Percy.** Classical archæology in schools. 32 p.O. Clarendon press, 1s.

- 442 **Harris, J. H.** The unsettling of the doctrine of formal discipline and its bearings upon the future of Latin and Greek. (Educ. Mar. 25: 421-27.)

A presentation and discussion of the bearing of intellectual development upon the educational value of studies in general; of Latin and Greek in particular.

- 443 **Jones, W. H. S.** The teaching of Latin. S. Blackie, 1s.

Some valuable hints for teaching Latin are found in this book and teachers would do well to study it. Chapter 1 states the uses of the classics

in schools; 2, 3 and 4 each discuss a year's teaching of Latin, the author claiming that "the average boy, with one hour a day for home work and school work combined, can attain to the requisite standard in Latin at the end of a three year course." The important features of his system are, for the first and second year, viva voce lessons, the use of diagrams, &c., pronunciation, study of long quantities and general adaptation of lessons to the sense experience of the class. The inductive method is to be followed. In the third year, one lesson a week is used for composition, one for an unseen and four for the reader. Tho one may question the possibility of such rapid advance in the average boy of from twelve to fifteen years, yet the system advocated has been tried in a prominent school with results which justify the author's statements.

- 444 **Knapp, Charles.** Some points in the literary study of Virgil. (School rev. June. 13: 492-508.)

A protest against the tendency to distinguish between the literary and the philological study of the classics, and the raising of the question whether the inclusion, in books or in the recitation, of quotations from modern literatures, &c., makes for a literary interpretation and appreciation of the classics.

- 445 **Lankester, E. R.** Nature and man. (Pop. sci. mo. Sept. 67: 435-41.)
Concluding part of the Romanes lecture delivered at Oxford, June 14, 1905. Since Oxford molds the thought and future of Englishmen to such an extent, the writer pleads for studies which reveal nature to man rather than for the old time classics.

- 446 **Mayor, J. E. B.** Preface to first Greek reader; 1 May, 1868. 34 p. O. Macmillan and Bowes, 1s.

With the theme that Greek and Latin can be taught more easily and with less waste of time than at present, the author shows what points a good text book should have, makes suggestions as to how the subjects should be taught, and quotes largely from prominent authors' and educators' proposals of the theme.

- 447 **Miller, E. L.** The Greek in English. (School rev. May. 13: 390-97.)
Shows that, for the specialist in English literature, Greek is not a luxury but a necessity.

- 448 **Wenley, R. M.** The nature of culture studies. (School rev. June. 13: 441-57.)

Read before the Michigan schoolmasters' club, March 31, 1905.
Limited to Latin and Greek.

375.9 *History in the curriculum*

- 449 **American historical association.** Report of the conference on the teaching of history in elementary schools held at the twentieth annual meeting in Chicago, Dec. 28-30, 1904. (In its Annual report, 1904, p. 203-10.)

Gives the main points made in an interesting discussion by J. A. James, Henry W. Thurston, G. O. Virtue and Emily J. Rice. As a result of this conference the Association appointed a Committee of 8 to report on a course of history for elementary schools and the proper training of teachers for this work.

- 450 **American historical association.** Report of the conference on the teaching of church history. (In its Annual report, 1904, p. 213-17.)

- 451 **Bellows, I. F.** The educational value of the history of France. (School rev. Nov. 13: 702-11.)

A presentation of the good results derived from a proper study of history and especially that of France.

- 452 **Clark, L. A.** An experiment in history teaching. (*Jour. of ped.* Sept. 18: 52-63.)
A succinct statement of the faults in ordinary methods, of what was needed to correct them, and an account of an interesting experiment which succeeded perfectly.
- 453 **Dunn, A. W.** Is history in the High school a "snap"? If so, why? (*Educ. rev.* Apr. 29: 410-18.)
A presentation of the qualities of this subject and a comparison with those of other subjects.
- 454 **Hall, G. S.** The pedagogy of history. (*Ped. sem.* Sept. 12: 339-49.)
Address at the Annual meeting of the New England history teachers' association, May, 1905.
A discussion of "why we teach history at all; what should it do for the young; why should it have a large and growing place in our curriculum? What is its value and what can and should it do for the young?"

376 EDUCATION OF WOMEN

See also 375.64.

- 455 **Carpof, Tirva.** A native girls' school in Tunis. (*Jour. of educ.* Apr. 36: 298-99.)
A brief description of the school, its origin, methods and results.
- 456 **Gilman, Arthur.** Rhoda's teacher and her school. (*Atlantic*, Aug. 96: 160-66.)
A discussion of what qualifications one should expect in a daughter's teachers and in her school.
- 457 **Gordon, Kate.** Wherein should the education of a woman differ from that of a man. (*School rev.* Dec. 13: 789-94.)
Considers the questions whether a woman's educational training should be, in any sense, a matrimonial one, and whether, in pursuing the same subject that a man does, she should be taught by a different method.
- 458 **Mass.—Statistics and labor, Bureau of.** Industrial education of working girls. 38 p. O. Mass. bureau of statistics and labor, Bost., 5c.
An investigation into the value of a public school education to the working girl to find out what kind of education she needs and how far the public school supplies what is necessary. Tables for various industries were compiled giving various items as to age, education, pay, nationality and mode of living of girls in Connecticut, Massachusetts, New Jersey, New York and Pennsylvania. The tables are explained and conclusions drawn from the facts collected. A description of a trade training school for girls located in Boston and started July, 1904, is also included.
- 459 **Smith, A. L.** Higher education of women and race suicide. (*Pop. sci. mo.* Mar. 66: 466-73.)
Argues strongly against it as unfitting women for home life.
- 460 **Women at the German universities.** (*Educ. rev.* Jan. 29: 102-6.)
A definite summary of the present status of women at the German Universities; contributed by Dr. Otto W. Beyer to the London "School."
- 461 **Woolman, M. S.** The Manhattan trade school for girls. (*Educ. rev.* Sept. 30: 178-88.)
A presentation of the needs which created the school, and the work now done in it.

- 462 **Yudelson, Sophie.** The education and professional activities of women. (*Annals of Amer. acad.* Jan. 25: 117-23.)

A résumé of the subject, with comparative and statistical treatment. It includes students, the teaching, medical, law and theological professions.

376.7 Co-education

- 463 **Hall, G. S.** Coinstruction in graduate schools. (In *Association of American universities. Journal of proceedings and addresses of the sixth annual conference, 1905.* p. 42-51.)

A summary of the fields of research where women do, or do not, do good research work, and reasons for, and a characterization of their personality as developed and shown in graduate courses. The statements given are based on personal experience. p. 46-51 are occupied with a discussion of the subject by various educators.

- 464 **Harper, W. R.** Coeducation. (In his *Trend in higher education. University of Chic. press, \$1.50.* p. 294-311.)

A brief consideration of the historical development of the system, with the attitude of various parts of the country towards it, and the reasons. Also, a frank discussion of the phases of the coeducational problem which must in time be solved.

- 465 **Parsons, E. S.** The social life of the coeducational college. (*School rev.* May. 13: 382-89.)

The question of how best to give students the corporate life of an institution not educational, raised, and suggestions made towards solving it.

- 466 **Small, A. W.** Coinstruction in graduate schools. (In *Association of American universities. Journal of proceedings and addresses of the sixth annual conference, 1905.* p. 32-42.)

A statement and discussion of results gleaned from official sources as to the experience and conditions of coeducation in the universities belonging to the Association. Results of statistics as to what institutions admit women to graduate work and upon what basis, the percent of attendance. Some testimonials of officials are also included.

- 467 **Smith, A. T.** Co-education in the schools and colleges of the United States. (In *U. S.—Education, Comm'r of. Report for 1903.* 1: 1047-78.)

A history and description of the movement to date. A bibliography is appended.

377 RELIGIOUS AND ETHICAL EDUCATION

For religious education in Africa, see no. 87; among the Muslims, see no. 80. See also section 375.2 Theological education.

- 468 **The Bible in American colleges.** (*Biblical world*, Sept. 26: 215-23.)

Statistics from 271 American colleges arranged by states, showing: (1) Number of students in college.—(2) Number doing biblical work in regular college classes.—(3) Number in Y. M. C. A., Bible chairs, &c.—(4) An estimate of number in regular attendance on other Bible classes, in adjacent churches, &c. Includes all important colleges.

- 469 **Brady, J. F.** The teaching of Christian doctrine. (*Catholic world*, Aug. 81: 671-80.)

Insists upon its necessity in connection with secular education.

- 470 **Brosnahan, Timothy.** The educational fact. (*Amer. Cath. quar. rev.* Apr. 30: 209-25. July, 508-33.)

Considers what education is, its purpose, what its results should be, largely

from a religious point of view, emphasizing the need of religious training which the government has discarded for public schools.

- 471 **Brumbaugh, M. G.** Making of a teacher: a contribution to some phases of the problem of religious education. 357 p. O. Sunday school times co., \$1.

Intended primarily for the Sunday school, tho secular teachers will find the underlying principles helpful in guiding them. Aims to inspire and vitalize teaching. Discusses the psychological principles underlying good teaching, the training required of teachers, the educative methods used by Jesus and the scope of religious education. Timely, suggestive and helpful.

- 472 **Coe, G. A.** The religious spirit in the secondary school. (School rev. Oct. 13: 581-96.)

Read at the Conference at Dartmouth College, May, 1905.

With special reference to the high school. The arguments for a religious spirit in teaching, with no "goody-goody" elements.

- 473 **Drawbridge, C. L.** Training of the twig: an essay on the religious education of the young. 191 p. O. Longmans, \$1.25.

"Object of this book is to deal popularly and simply with the rudiments of the science and art of religious education of children. It is meant for parents and teachers." Preface.

- 474 **Faunce, W. H. P.** Annual survey of moral and religious progress. (Educ. rev. Apr. 29: 364-86.)

Read at the annual meeting of the Religious education association, Boston, Feb., 1905, and included in their Proceedings of the 3d annual meeting, p. 9-19.

Investigation as to "how far our entire educational apparatus, from kindergarten to university, is adequately performing the function of character-building, and especially whether the agencies which have been established with this avowed purpose are increasingly efficient in their work." Definite in detail and optimistic in tone.

- 475 **Harper, W. R.** The university and religious education. (In his Trend in higher education. University of Chic. press, \$1.50. p. 55-77.)

Discusses the position in the university during the past and the present of religious education, emphasizing the need of instruction in this subject and suggesting the lines it should follow and the good results that would flow from it.

- 476 **Henderson, C. R.** The part of the home in religious education. (Biblical world, June. 25: 418-26.)

What the home can do, considered historically and ethically.

- 477 **Hodge, R. M.** Manual methods of Sunday-school teaching; with full directions and photographs of work executed by Sunday-school pupils. 39 p. O. R. M. Hodge, N. Y. 3cc.

CONTENTS: Introduction. Manual methods available.—Model work.—Map work.—Blank book work.—Ways and means.—Apx. A. The essentials of a good Sunday school.—Apx. B. A Sunday-school curriculum.

Combines a discussion of principles with suggestions and definite directions for carrying on the work. A list of supplies essential, with the price, is also included. The curriculum is tabulated and graded.

- 478 **Gasson, Rev. T. I.** The religious education association. (Catholic world, Apr. 81: 1-10.)

Discusses the necessity of religious education being combined with secular, as the subject was treated at the association, and criticises the attitude taken by present educators.

- 479 **Lawrance, Marion.** Sunday School statistics. (In U. S.—Education, Comm'r of. Report for 1903. 2: 2422-31.)
Full statistics for United States and some for Europe.
- 480 ——— How to conduct a Sunday school; or, Twenty-eight years a superintendent. 279 p. O. Revell, \$1.25.
"For the most part details of the best way to work. Contains helpful suggestions for the different departments of the Sunday school and a list of one hundred books for Sunday school workers."
- 481 **McDevitt, P. R.** The moral training of the young in the Catholic church. (Intern. jour. of ethics, July. 15: 417-31.)
An address given under the auspices of the Society for Ethical Culture of Philadelphia.
An exposition of what the Catholic Church is now doing for education in the United States, the principles underlying the work, and an outline of the methods and means which flow logically from the immovable conviction of the truth of those principles.
- 482 **McKinney, A. H.** Pastor and teacher training: the Sunday school board seminary lectures, course no. 4, delivered at the Southern Baptist theological seminary, Louisville, Ky., Dec. 5-9, 1904. 191 p. D. Sunday School board Southern Baptist, 50c.
- 483 **McMillan, Thomas.** Religious knowledge and American schools. (Catholic world, Apr. 81: 84-93.)
Quotations from prominent educators with running commentary, trying to prove the need for religious instruction in schools. A Roman Catholic point of view.
- 484 **Mims, Edwin.** What should be done by colleges and universities for the religious training of students? (In Association of colleges and preparatory schools of the southern states. Proceedings of the eleventh annual meeting, 1905. p. 13-20.)
A statement of some phases of college life now emphasized, and a plea, with practical suggestions, for more emphasis to be placed on the religious side.
- 485 **Mullany, Rev. J. F.** Is Catholic education a menace to American institutions? (No. Amer. rev. Oct. 181: 544-54.)
Argues for the negative side.
- 486 **Ottley, E. B.** Religious instruction in primary schools. (Monthly rev. Feb. 18: no. 2, 137-45.)
A presentation of the needs for, and difficulty in, giving religious instruction in primary schools. Has English conditions in mind.
- 487 **Pace, E. A.** Modern psychology and Catholic education. (Catholic world, Sept. 81: 717-29.)
"An inquiry into the educational value of Catholic teaching and practice."
- 488 **Parkinson, W. D.** The school and the church. (School rev. Nov. 13: 661-77.)
A call to co-operation between school and church, with suggestions as to how it should be secured.
- 489 **Roads, Charles.** Sunday school organization and methods. 110 p. D. Methodist book concern, 35c.
- 490 **Religious education association.** Proceedings of the third annual convention, Boston, Feb. 12-16, 1905: The aims of religious education. 525 p. O. Rel. educ. assoc., 153 La Salle st., Chicago, \$2.

Contents fully up to high standard of first 2 volumes. Over 100 brief papers are printed from ministers and educators covering not only important general topics but such subjects as the function and methods in religious and moral education of our institutions of elementary, secondary and higher education; churches, Sunday schools and theological schools and of such purely secular social agencies as the press, the home, libraries, art, boys' clubs, &c.

- 491 **Sunday school progress.** (Biblical world, Aug. 26: 83-88.)
A résumé of the results and statements of the Toronto Convention of the International Sunday school association.
- 492 **Sheedy, M. M.** The Catholic parochial schools of the United States. (In U. S.—Education, Comm'r of. Report for 1903. 1: 1079-1101.)
An exposition of their development, character, methods and aims.
- 493 **Sheldon, W. D.** The ethical function of the school. (Educ. Feb. 25: 321-32.)
A presentation and discussion of the problem of ethical training in schools.
- 494 **See, E. F.** The teaching of Bible classes, principles and methods; with special reference to classes of young men and boys. 180 p. D. The international committee of Young men's Christian associations, 75c.
"References for reading": at the end of each chapter.
Presents the notes of a course of study pursued by classes of young men for several years under the leadership of the author.
- 495 **Tucker, W. J.** How shall pupils be taught to estimate themselves? (School rev. Oct. 13: 597-605.)
Read at the Conference of Elementary and Secondary Schools at Dartmouth college.
A presentation of some ways in which the school can aid in the transition from the unconsciousness of childhood to the simplicity of powerful manhood.
- 496 **Votaw, C. W.** The field of religious education in America. (Biblical world, May. 25: 347-60.)
An address before the Religious education association, Boston, Feb. 12-16, 1905.
An elaboration of the title.
- 497 **Waldegrave, A. J.** comp. Teacher's hand-book of moral lessons. 154 p. D. Dutton, \$1. 1904.
Under such general topics as Habits, Manners, Patriotism, Justice, Truthfulness, Zeal, Work, Thrift, definite moral ideas are brought out and each subject elaborated, including also directions for teaching the principle involved. "The book was written to illustrate the lessons outlined in Standard V. in the 'Graduated syllabus of moral instruction for elementary schools' and is based on notes of lessons furnished by various teachers. Tho arranged for one standard, it is hoped the book will be found of general usefulness." Preface.
Suggestive and helpful to those teachers wishing to inculcate moral lessons and ideas in a manner entirely separate from definite religious instruction.
- 498 **Wells, A. R.** Sunday-school problems: a book of practical plans for Sunday school teachers and officers. 297 p. D. Wilde, \$1.
A record of the author's thoughts and observations during seven years. A simple and suggestive manual aiming to show how children may be taught.

378 COLLEGES AND UNIVERSITIES; HIGHER EDUCATION

See the papers printed in the N. E. A. Proc. p. 481-515 under the Department of higher education.

- 499 **Adams, C. D.** College preparation in character. (School rev. Oct. 13: 606-15.)

An address given at the Conference of Elementary and Secondary schools with Dartmouth college, May 12, 1905.

A presentation of the moral dangers in college life and how the school may fit its pupils to meet them.

- 500 **Baker, G. P.** The mind of the undergraduate. (Educ. rev. Sept. 30: 189-200.)

Read before the Schoolmasters' Association of New York and vicinity.

A student's dislike for quiet thinking: the reasons and results.

- 501 **The burden of the college president.** (Nation. Oct. 81: 335.)

Gives his qualifications and duties.

- 502 **Canfield, J. H.** America and Germany: an academic interchange. (Rev. of rev. Dec. 32: 679-82.)

A lucid description of the origin, aims and present condition of the Theodore Roosevelt Professorship. See also the October no. p. 488-89.

- 503 **Foreign universities and other foreign institutions of higher education in 1903.** (In U. S.—Education, Comm'r of. Report for 1903. 1: 669-87.)

Grouped according to date of founding, number of students, alphabetically and by countries.

- 504 **Harper, W. R.** The business side of a university. (In his *Trend in higher education*. University of Chic. press, \$1.50. p. 161-85.)

After briefly contrasting the business conditions of a university, now and one hundred years ago, the author shows the many and various ways in which the institution of to-day touches the world at large, on the business side. He then states the general principles which should govern it in its financial transactions.

- 505 ——— The trend in higher education. 390 p. D. The University of Chicago press, \$1.50.

A moderate and balanced discussion of some of the chief university problems of the day from what may be called a Western point of view. It is a trifle hard, from the very greatness and variedness of it all, to decide just what the writer feels the "trend" to be, tho he, himself, expresses it as "democratization." The varied topics treated, the sympathy and style of treatment and the position in the educational world held by the author, make the work of interest and value.

CONTENTS: 1. The university and democracy.—2. Some present tendencies of popular education.—3. The university and religious education.—4. Waste in higher education.—5. The old and the new in education.—6. Dependence of the West upon the East.—7. Higher education in the West.—8. The contribution of Johns Hopkins.—9. The urban university.—10. The business side of the university.—11. Are school-teachers underpaid?—12. Why are there fewer students for the ministry?—13. The theological seminary in its civic relationship.—14. Shall the theological curriculum be modified, and how?—15. University training for a business career.—16. Shall college athletics be endowed?—17. Latin versus science.—18. Coeducation.—19. Alleged luxury among college students.—20. The scientific study of the student.—21. The college officer and the college student.—22. The length of the college course.—23. The situation of the small college.

Important papers are noted separately under the proper subject headings in other parts of this bibliography.

- 506 **Jebb, Sir R. C.** University education and national life. (Pop. sci. mo. Nov. 67: 647-59.)
Address by the president to the Educational science section of the British association for the advancement of science, South Africa, 1905.
Shows the ways in which a university may touch and mold national life.
- 507 **Patten, S. N.** University training for business men. (Educ. rev. Mar. 29: 217-33.)
The article aims to point out some fundamental changes that commercial training is making in college programs and in educational theory, and to discover the type of training which will so supplement business experience that rapid promotion is possible.
- 508 **Pritchett, H. S.** Shall the university become a business corporation? (Atlantic, Sept. 96: 289-99.)
A comparative description of the organization of state and privately supported universities in America, and the organization of the European universities, raising the question of how best they can be managed. Table of statistics also included.
- 509 **Sachs, Julius.** The elimination of the first two college years: a protest. (Educ. rev. Dec. 30: 488-99.)
Arguments against it.
- 510 **Thomas, M. C.** The college. (Educ. rev. Jan. 29: 62-84.)
Read before the International congress of arts and science, St. Louis, Mo., 1904.
A defense of the college from its various opponents and a plea for the maintenance of its ideal and its integrity.
- 511 **Thorndike, E. L.** The selective influence of the college. (Educ. rev. June. 30: I-II.)
"Facts concerning the amount of the elimination and its points of incidence in thirty-four colleges, and concerning the variations among fourteen of these institutions with respect to the length of time an entering student is likely to stay in them" are given from statistics which the author compiled. Both men and women's colleges are studied.
- 512 **Thwing, C. F.** Should college students study? (No. Amer. rev. Feb. 180: 230-34.)
Discusses the fact that Harvard students,—and others,—average twenty-six hours a week of scholastic labor.

China

- 513 **Fong, W. N.** Some phases of the educational problem in China. (Pop. sci. mo. Aug. 67: 348-52.)
Difficulties in the way of teaching Chinese students "Western learning."

Germany

- 514 **Bode, Mabel.** German universities: a review of Prof. Paulsen's work on the German university system; with a preface and appendix. 43 p. O. P. S. King, 1s. net.

Great Britain

- 515 **At the university.** (Blackwood's, Mar. 177: 351-66.)
A continuation of "Boy at the public schools." A description to a mother of how "Boy" would find life and conditions at Oxford or Cambridge.

516 *Edinburgh university*. **MacPherson, J. I.** Twenty-one years of corporate life at Edinburgh university: with an introduction by Principal Sir W. Turner. 126 p. O. Darien Press (Edinburgh.)

517 *London*. **Allchin, W. H.** An account of the reconstruction of the University of London. Part 1: From the foundation of the university to the appointment of the First Royal Commission, 1825-88. 333 p. O. Lewis, 2s. 6p. net. (Reprinted from the Medical magazine.)

518 *Oxford*. **The American Rhodes scholars at Oxford.** (Educ. rev. Feb. 29: 109-22.)

"An admirable account of the experiences of the American Rhodes scholars at Oxford contributed to the New York Tribune of Dec. 17 and 20, by the London correspondent of the paper." Shows also the attitude of the University towards the cosmopolitan idea of the founder.

For further consideration of the Rhodes bequest and university federation, its organization and possibilities, see the Nineteenth century, Dec. 56: 970-84, by J. Churton Collins, also nos. 521 and 522 below.

519 *Oxford*. **Meyrick, Rev. Frederick.** Memoirs of life at Oxford and experiences in Italy, Greece, Turkey, Germany, Spain and elsewhere. 348 p. O. Dutton, \$3.50 net.

Throws much side-light on the "Tractarian Movement" at Oxford in 1833-41, and on the "Old Catholic reform movement" on the continent.

"Much entertaining matter connected with university and social life at Oxford is also found here" (Critic), especially the incidental descriptions and stories of people of minor note who made up the Oxford of fifty years ago. The author is noticeably biased at times in his judgments.

520 *Oxford*. **Peel, Robert, and Minchin, H. C.** Oxford. 156 p. O. Methuen, 6s.

A beautiful pictorial guide and description of Oxford University.

521 *Oxford*. **Schutt, W. E.** Experiences and impressions of a Rhodes scholar. (In Educ. rev. Mar. 29: 234-44.)

A brief history of the experience of the Americans during their first three months' stay at Oxford, with such concrete instances as may be interesting.

522 *Oxford university*. **Williams, C. L.** The American student and the Rhodes scholarships at Oxford university; a manual of information. 45 p. O. The Sprague publishing co., Detroit, Mich., 25c.

The information was gathered mostly during a seven weeks' visit at Oxford, England, in 1903, to find out things helpful to those Americans aspiring to become Rhodes scholars. Among other points discussed are the history of Oxford University, its organization, government, buildings, tutors, athletic sports, moral atmosphere, &c., the manner of living there, the methods of study, the slang, and the variations between the different colleges.

India

523 **Madras, Henry.** Higher education in India. (Nineteenth cent. Jan. 57: 120-28.)

A brief history, showing mainly its defects, difficulties and what has been done.

Ireland

524 "**Catholicus.**" The Irish University question; its history and its solution. 60 p. O. Simpkin, 1s. net.

- 525 **Clinch, B. J.** University education in Ireland. (Amer. Cath. quar. rev. Jan. 30:28-43.)
- 526 **Gwynn, Stephen.** The Irish university question. (Fortn. rev. May. 83:919-32.)
A political and religious history and discussion of the demands of Catholics for a different organization and curriculum in Irish universities.
- 527 **Lambert, G. T.** The scandal of university education in Ireland. (Nineteenth cent. June. 57:912-18.)

Italy

- 528 *Rome university.* **Edmiston, Homer.** Classical studies in Rome. (Nation, June. 80:478-79; 499-500.)
A description of the University of Rome and the American school of classical studies, with special emphasis upon the opportunities offered for classical study.

United States

- See also nos. 48, 49, 50, 59, 164, 168. Also section 376, Education of women. Full tho belated statistical information about American colleges and universities is given each year in the second volume of the report of the U. S. Commissioner of education.
- 529 **Associated Harvard clubs.** Report of the committee on the question of establishing at Harvard a three years' course for the degree of A. B. Submitted at the meeting at Louisville, Ky. May 27, 1905. 58 p. O. The Weekly mirror print, Minneapolis. No price.
A brief view of the entire subject, with reasons, for and against. Also, opinions of many leading authorities at Harvard and elsewhere upon the subject. No definite decision arrived at.
- 530 **Bailey, W. B.** Expenses of college students. (World to-day, Apr. 38:386-89.)
Statistics based upon the reports of two hundred and fifty Yale men, mostly juniors at the time, aiming to show the difference between the expenditures of the poor and the wealthy student.
- 531 **Cattell, J. McK.** The university and business methods. (Independent, Dec. 59:1514-16.)
A frank statement of objections to present commercial and trust features in the management of our universities.
- 532 **College tuition fees.** (Nation, Feb. 80:129-30.)
A plain statement of the financial needs of colleges and proposals as to the satisfying of them.
- 533 **Eliot, C. W.** Resemblances and differences among American universities. (Science, Dec. n. s. 22:769-84.)
Delivered at Yale University, Nov. 15, 1905.
- 534 **Finley, J. H.** Is the payment of tuition in the free state university a just charge on the public treasury? (In Association of colleges and preparatory schools of the middle states and Maryland. Proceedings of the eighteenth annual convention held at Princeton university, 1904. p. 48-56.)
An eloquent discussion of this subject by a man who thoroly believes the state should provide higher education for its rich and poor alike.

- 535 **James, E. J.** The function of the state university. (Science, Nov. n. s. 22: 609-28.)
Inaugural address as president of the University of Illinois, Oct. 18, 1905. Its origin, some of its aims, its necessity in our higher educational system and its relation to normal and other secondary educational schools.
- 536 **Reichel, H. R.** Some characteristics of American universities. (Nature, Nov. 73: 44-46.)
Speaks mainly of the technical schools, the length of the course and post-graduate work as they seem to an Englishman.
- 537 **Scott, W. A.** The religious situation in state universities. (Biblical World, July. 26: 20-29.)
Statistics were compiled from universities regarding various phases of religious work in them, and deductions of an optimistic character drawn therefrom.
- 538 **Stewart, J. L.** Is the payment of tuition in the free state university a just charge on the public treasury? (In Association of colleges and preparatory schools of the middle states and Maryland. Proceedings of the eighteenth annual convention held at Princeton university, 1904. p. 56-60.)
Considering both public and privately endowed colleges, from the financial side, the author holds that a crisis is imminent, and that private aid and tuition are not sufficient to enable universities to do the work that is expected of them.
- 539 **Thwing, C. F.** American universities. (In U. S.—Education, Comm'r of. Report for 1903. 1: 293-317.)
A survey of their origin, the influences working upon them, their growth and broadening of influence and activities and their relations to various phases of life.
- 540 **Tombo, Rudolf.** Geographical distribution of the student body at a number of American universities. (Science, Oct. n. s. 22: 424-28.)
Tables and explanations showing the localities from which the students of nine of the leading universities come.
- 541 ——— University registration statistics. (Science, Dec. n. s. 22: 729-40.)
Comparative statistical study of the number of students registered in leading universities, by departments or colleges.
- 542 **Whipple, G. M.** The distribution of the daily time of Cornell students. (Pop. sci. mo. Oct. 67: 538-54.)
A statement of the methods of gaining the statistics, and critical comments upon the various phases of the results gained.
- 543 **Amherst college. Humphrey, Heman.** Sketches of the early history of Amherst college, prepared by President Heman Humphrey, D. D., at the request of the trustees. 32 p. O. Kingsbury box and printing co., Northampton, Mass.
"An undated manuscript in the handwriting of President Humphrey . . . the property of Amherst college library. It is published and distributed by the kindness of Mr. F. W. Stearns, of the class of 1878."
- 544 **Chicago university. Hodges, George.** The University of Chicago. (Outlook, May. 80: 86-91.)
A history and description of its growth.

- 545 ——— **University of Chicago.** (In U. S.—National museum. Report. 1903. p. 491-518.)
A description of the various institutions connected with it, as to their equipment, expenses and usages, and a history of the university itself and what it does. Trustworthy.
- 546 **Columbia University. Columbia university.** (In U. S.—National museum. Report 1903. p. 358-75.)
An authoritative history, and a description as to its finances, tuition fees, buildings, power plant and institutions connected with it.
- 547 ——— **New methods at Columbia.** (Architectural rec. Feb. 17: 149-50.)
New requirements in regard to the School of architecture.
- 548 **Thomas, Calvin.** The new program of studies at Columbia College. (Educ. rev. Apr. 29: 325-37.)
A statement of the reasons which led to a change in the curriculum, the advantages or disadvantages of the new program and the attitude of the Faculty upon the matter.
- 549 **Cornell University. Hewett, W. T.** Cornell university, a history. 4 v. Q. New York, The University publishing society. \$25.
A many-sided and sympathetic history of the great university from its beginning—including its precursors—to the present day. Amply and appropriately illustrated.
CONTENTS: V. 1, History of the University.
V. 2, History of the various departments and colleges.
V. 3, History of the various activities of the University, as, Societies, Athletics, etc.
V. 4, Register of the Faculty, Trustees and Students.
- 550 **Harvard University. Hatch, M. R. P.** Harvard university; some account of its makers, its library and other buildings and its club life. (New Eng. mag. Nov. 39 (new ser.. 33) : 307-22.)
- 551 **Illinois University. James, E. J.** What the new president is planning for the University of Illinois. (Rev. of rev. Oct. 32: 441-43.)
States the aims and present facilities for work.
- 552 **Leland Stanford University. Leland Stanford junior university.** English club. The first year at Stanford; sketches of pioneer days at Leland Stanford junior university. 159 p. O. English club. Stanford university, \$1.
CONTENTS: Jordan, D. S. Early days of Stanford.—Bartlett, E. P. Beginnings in Palo Alto.—Elliott, E. C. The Cornell colony at Palo Alto.—Angell, F. The early history of athletics at Stanford.—Field, C. K. Letters home.—Batchelder, F. J. Early life at the University outside the dormitories.—Batchelder, F. J. Notes on the early organizations at Stanford.—Allen, B. S. "The Frenchman."—Ballard, R. P. The San Francisco rancho.
- 553 ——— **Quelle, M. S.** A visit to Stanford university. 85 p. O. University press, \$1.
A brief history of the university and of its donor, and a description of the former written in familiar style. Fully illustrated.
- 554 ——— **Wallace, Folkstone.** Student life at Stanford university (Overland mo. 60 (ser. 2. 45) : 30-39.)
Largely from the recreation side.

- 555 *Massachusetts institute of technology.* **Massachusetts Institute of Technology** and Harvard University. (Science, June. 21: 969-84.)
 Agreement between Harvard University and the Mass. Institute of Technology; extracts from the will and codicils of the late Gordon McKay; extracts from the minority report in favor of alliance; extracts from the report adverse to the alliance adopted by the Faculty.
 Concerns the proposed affiliation between them.
- 556 *Northwestern University.* **Wilde, A. H.** Northwestern university; a history, 1855-1905. Semi-centennial ed. 4 v. O. New York, The University publishing society.
- 557 *Princeton University.* **Brinton, Christian.** Recent college architecture; 1. Princeton—Pennsylvania. (Booklover's mag. Nov. 6: 547-58.)
 A brief history and criticism of the architecture shown in these two universities. Illustrated.
- 558 ——— **Harper, G. McL.** The new program of studies at Princeton. (Educ. rev. Feb. 29: 141-50.)
 A statement and explanation of the reformed system of studies for undergraduates, adopted by the Trustees of Princeton, June, 1905.
- 559 ——— **Williams, J. R.** The handbook of Princeton, with an introduction by Woodrow Wilson. 154 p. O. Grafton press, \$1.50.
 CONTENTS: Introduction.—History of the university.—Grounds and buildings of the university.—Upperclass clubs and the university athletic grounds.—The town.—The Princeton theological seminary.—The Lawrenceville school.
 A guide book,—tho without the earmarks of one,—describing the interesting and patriotic objects about Princeton and outlining their history. The account is, on the whole, accurate and sympathetic, while many good pictures add greatly to the interest of the book. It is the only book published for more than twenty years which covers this topic at all.
- 560 *Texas University.* **Garrison, G. P.** The university of Texas and its new president. (Rev. of rev. Dec. 32: 682-85.)
 A brief history of the University, its work and its president.
- 561 *Transylvania University.* **Peter, Robert.** History of the Medical department of Transylvania university; prepared for publication by his daughter, Miss Johanna Peter. 205 p. Q. J. P. Morton & co., \$4. (Filson club publications, no. 20.)
- 562 *University of the South.* **Fairbanks, G. R.** History of the University of the South, at Sewanee, Tennessee, from its founding by the southern bishops, clergy and laity of the Episcopal church in 1857 to the year 1905. 403 p. O. The H. & W. B. Drew company.
- 563 *Virginia University.* **Kent, C. W.** Thomas Jefferson's university. (Rev. of rev. Apr. 31: 452-59.)
 A history of the University of Virginia and a description of its peculiar features, income and teaching force.
- 564 ——— **Page, T. N.** The University of Virginia. (Scribner, Apr. 37: 396-410.)
 A history of the origin, growth and development of the first "real university of this country."

- 565 *Wisconsin University*. The jubilee of the University of Wisconsin in celebration of the fiftieth anniversary of its first commencement. 277 p. O. Madison, The jubilee committee. No price.
Contains the address by T. C. Chamberlin at the 1904 commencement on the state university and research.
- 566 *Yale University*. **Hadley, A. T.** Educational problems at Yale university. (Science, Oct. n. s. 22: 514-20.)
From the annual report.
Its duty to the students, to the public, and to secondary schools thru entrance requirements.
- 378.01 *College entrance requirements*
- 567 **College entrance examination board.** Fifth annual report of the secretary. 53 p. O. Published by the Board. May be had from the secretary, T. F. Fiske, Substation 84, New York city, no charge.
Also published in Educ. rev. Oct. 30:250-302.
"It gives an account of the operations of the Board during its fourth year, and is accompanied by statistical tables showing in detail the more important results of the examinations." See no. 570 below.
- 568 **College entrance examination board.** Questions set at the examinations held June 19-24, 1905. 113 p. O. Ginn, 60c. net.
The usual administrative data and papers given.
- 569 **Collins, J. C.** Greek at the universities. Fortn. rev. Feb. 83:260-71.)
Discussion of the question whether Greek should continue to be required for entrance at Oxford and Cambridge, or whether a compromise would not be well.
- 570 **Farrand, Wilson.** Five years of the College entrance examination board. (Educ. rev. Oct. 30:217-30.)
A review of the work of the Board and an estimate of the value of its services to the cause of education.
- 571 **Foster, W. T.** Should the high school diploma admit to college. (Educ. Dec. 26:203-8.)
Discusses whether the college should meet the high school, or vice versa, and outlines a plan to solve the problem.
- 572 **Jordan, M. A.** Report of the delegates to the conference on uniform entrance requirements in English. (School rev. Dec. 13:795-800.)
Includes names of books advocated for study.
- 573 **Kirtland, J. C.** The college requirements and the secondary-school work. (School rev. Dec. 13:818-27.)
Read before the Classics conference of the National educational association, at Asbury Park, July 6, 1905.
A discussion of the preparation necessary, especially in regard to the requirements for Greek and Latin.
- 574 **Lowell, D. O. S.** Are the present methods of admission to college satisfactory or fair? (Jour. of ped. Sept. 18:25-34.)
Address delivered before the American institute of instruction, at Portland, Me., July 12, 1905.
Present methods and their faults presented; also a compromise scheme to obviate their defects.
- 575 **MacLean, G. E.** Admission of students to college by certificate. (Science, Aug. n. s. 22: 167-75.)
The claims of three methods of admission reviewed.

- 576 **Owen, J. M.** Some student opinions on entrance requirements in English. (*Educ. June.* 25: 619-26.)

During two school years, in Lewis Institute, Chicago, various questions were asked the pupils as to their choice in the works studied, to which frank replies were given. The opinions of 178 and 122 students were thus gained, the results tabulated and interesting conclusions drawn therefrom.

- 577 **Stoddard, F. H.** The uniform entrance examinations in English. (*Educ. rev. Nov.* 30: 375-83.)

Statement of conditions which made their need felt, and of what has been done along this line.

378.2 *Academic degrees*

- 578 **Adams, G. B.** The degree of Doctor of Philosophy. (*Educ. rev. June.* 30: 31-40.)

Points out defects in our present method of granting the degree and suggests as improvements that the thesis be not required to be either an original contribution to knowledge or printed.

- 579 **Foster, W. T.** To what extent should artistic and utilitarian subjects in school and college count towards the degree of A. B.? (*School rev. Dec.* 13: 805-15.)

A plea for culture studies against the utilitarian ones. Decided that utilitarian ones should not be accepted.

Discussion opened by R. G. Huling.

- 580 **Hellems, F. B. R.** The course of study and the degrees of state universities. (In *National association of state universities in the U. S. Transactions and proceedings of the ninth meeting, Des Moines, 1904.* p. 51-58.) Also in *Colorado University Publications.* v. 2, no. 2.

A summary of results derived from replies received from colleges and universities as to the kind of degree given, the major and minor system of studies, the combining of college and technical courses while doing undergraduate work, and graduate work in universities.

- 582 **Hudson, Richard.** Are the degrees of Bachelor of science, Bachelor of philosophy and Bachelor of letters to be preserved or to be merged in the degree of Bachelor of arts? (In *Association of American universities. Journal of proceedings and addresses of the fifth annual conference, 1904.* p. 56-63.)

"The purpose of this paper is to examine the policy of the University of Michigan in regard to the Bachelor's degree, from the date of the establishment of the degree of B. S. to the recent abolition, as far as the Department of Literature, Science and the Arts is concerned, of all forms of the Bachelor's degree except A. B." Author.

- 583 **Requirements for the Bachelor's degree.** (In *North central association of colleges and secondary schools. Proceedings of the tenth annual meeting, 1905.* p. 33-51.)

The report is concerned, 1. With a brief view of the history of the A. B. degree.—2. A statement of what the degree should represent in the person receiving it.—3. The requirements which colleges make regarding the methods and means for securing these results; a tabular arrangement of colleges shows definitely each one's requirements for admission and for graduation. These are taken from the college catalogs.—4. The contributions which different subjects make towards the results which the man who receives the degree embodies.—5. The professional concessions and combinations.—6. The inspection of colleges.

- 584 **Shorey, Paul.** Are the degrees of Bachelor of science, Bachelor of philosophy and Bachelor of letters to be preserved or to be merged in the degree of Bachelor of arts? (In Association of American universities. Journal of proceedings and addresses of the fifth annual conference, 1904. p. 63-75.)

A plea for retaining the distinctive B. A. degree, and a general discussion of the elective system, with its results.

378.3 *Graduate work; research*

For a statement of research work now under way see the *Yearbook* of the Carnegie Institution. See also no. 565.

- 585 **MacLean, G. E.** Some aspects of graduate work in state universities. (In North central association of colleges and secondary schools. Proceedings of the tenth annual meeting, 1905. p. 85-92.)
General considerations of the present and past conditions of graduate work in America.

- 586 **Methods for promoting research in the exact sciences.** (In Carnegie institution. Year-book no. 3, 1904. p. 179-93.)

Proposals from several eminent men suggesting how it may be done.

- 587 **Ritter, W. E.** Organization in scientific research. (Pop. sci. mo. May. 67:49-53.)

A need, and how it may be satisfied.

- 588 **West, A. F.** True and false standards of graduate work. (In North central association of colleges and secondary schools. Proceedings of the tenth annual meeting, 1905. p. 71-85.)

The discussion is limited to those liberal studies which do not result in profit to the student. Three aspects of the subject are considered, our standards of knowledge, of expression and of judgment.

- 589 **Williams, H. S.** What is research? (Pop. sci. mo. June. 67:170-77.)

A definition, and a statement of requisites in men to be successful in research work.

379 PUBLIC SECONDARY EDUCATION; THE STATE AND EDUCATION

See also 372 for Public elementary education.

See the papers printed in the N. E. A. Proc. p. 423-79 under the Department of Secondary Education.

- 590 **Leighton, R. L.** The boy and his school; what it can and what it cannot give him. 97 p. O. Murray, 2s. 6p. net.

Frank, sensible remarks on secondary education for boys as the author has seen it in an English grammar school. Brief comments on various topics in a clear and interesting style.

- 591 **Macnaughton, D. A.** Utilitarian secondary education. (Contemp. rev. Jan. 87:51-64.)

Advocates a position midway between the "Philistian ineptitude of the utilitarian and the irrational asceticism of the scholar," for secondary education.

- 592 **Orr, William.** The high school and civic spirit. (Jour. of ped. Dec. 18:88-99.)

The question how to fit the boy and girl to enter intelligently on the duties of civic life presented, and illustrated from New York city's experience.

- 593 **Simkhovitch, Mrs. Vladimir.** The enlarged function of the public school. (In Nat. conference of char. and correction. Proceedings, 1904. p. 471-86.)

Contrasts education obtained in country and city, and shows what New York city is doing to create a more normal development in its children.

- 594 **Smith, F. W.** Secondary education in the last twenty-five years. (Educ. Sept. 26: 1-13.)

A brief summary of what has been accomplished, in which the larger points of development are considered.

379.II *School funds and finances. Taxation*

- 595 **Allen, W. H.** The importance of publicity in educational and charitable work. (No. Amer. rev. July. 181: 24-32.)

With special reference to what is done in New York city and speaking particularly of how the money for schools is spent.

- 596 **Cubberley, E. P.** School funds and their apportionment; a consideration of the subject with reference to a more general equalization of both the burdens and the advantages of education. 255 p. O. New York, Teachers college, Columbia university, \$1.50. (Teachers coll. cont. to educ. No. 2.)

With particular reference to the proper distribution of the school revenues at hand, so as to secure the best results, being based upon, and illustrated by, a statistical study of the subject. Advocates, 1st, a State system of schools rather than a series of local systems; 2d, that, being for the common good, the burden must be borne by all; 3rd, aid should be given proportionately to the needs and efforts of a community. Discusses various changes in our national life as affecting education, the existing inequalities, provisions for relief made and being made; then takes up the question of the distribution of present funds and considers the various bases upon which it can be made.

- 597 **Elliott, E. C.** Some fiscal aspects of public education in American cities. (Teachers coll. record, Nov. 6: 1-101.)

Published in Teachers college contributions to education. no. 6.

A statistical study of expenditures in various cities for educative and other activities. Gives measurement and causes of variability and the relationships of the various standards of expenditure.

- 598 **Harris, W. T.** The political economy in school finances: some of the conditions which cause variation in the rate of school expenditures in different localities. (Educ. rev. May. 29: 486-509.)

Read before the National Educational Association, Milwaukee, Wis., Mar., 1905. Published also in the N. E. A. Proc. p. 195-213.

A presentation of economic conditions in the United States, and illustrated by various tables of statistics.

- 599 **National educational association—Committee on taxation as related to public education.** Report to the National council of education. 87 p. O. Irwin Shepard, Winona, Minn., 10c.

This committee, with J. M. Greenwood as chairman, was appointed in 1902.

The report shows expenditures for maintenance and operation of schools in leading American cities as apportioned among 8 principal items.

The results for each item are compared and discussed. The following valuable papers deal with methods of taxation in specific localities.

Maxwell, W. H.—Methods of school taxation in New York city.

Schaeffer, N. C.—Taxation for school purposes.

Coon, C. L.—Twenty-five years' progress of public education in North Carolina; a comparative statistical study of school maintenance in the south.

Schaeffer, N. C.—Taxation for state purposes in Pennsylvania.

Carr, J. W.—Methods of taxation for school purposes in Indiana.

- 600 **Strayer, G. D.** City school expenditures; the variability and interrelation of the various items. 104 p. O. The Columbia university press, 30c. (Teachers coll. cont. to educ. no. 5.)

A study of the distribution of the money spent for schools among the various items of the budget, and is an attempt to discover the normal amount for each item by a study of current practice as shown by data obtained from fifty-eight cities of between ten and fifty thousand inhabitants, located in Massachusetts, Rhode Island, Connecticut, New York and New Jersey. The results are tabulated, arranged and explained, and conclusions drawn therefrom.

Published also in the Teachers college record. May, v. 6, no. 3.

Reviewed at length in Educ. Rev. 30: 531.

379.14 *School laws*

- 601 **Charter provisions as related to the organization and reorganization of school systems.** (In N. E. A. Proc. p. 214-23, 231-35.)

W. H. Maxwell considers the state's duty in education matters and what provisions are necessary in organizing a system.

F. L. Soldan discusses the changes brought about in education when new charters are given.

- 602 **Draper, A. S.** Educational legislation in the United States in 1904. (Educ. rev. Apr. 29: 387-93.)

From the Review of general legislation in the United States for 1904, published by the N. Y. state Educational department.

A brief summary of legislation "so far as it may seem to reflect any maturing of popular sentiment, indicate any new popular purpose, or create any real change in plans of organization or methods of procedure." Divided by topic; as, Finances, Teachers, Attendance, &c.

- 603 **Eliot, E. C.** A non-partisan school law. (In N. E. A. Proc. p. 223-31.)

A description of the workings of the school law in St. Louis, Mo.

- 604 **Major, D. R.** School legislation in Ohio. (School rev. Mar. 13: 221-31.)

Aims to state "briefly some of the more notable features of the so-called 'Education Act,' and to indicate some of its points of merit." A reply to rather severe editorial criticisms of the Act.

- 605 **N. Y. (state)—Education dep't.** Educational legislation, 1905. 14 p. O. Alb., N. Y. state education department, gratis.

Consists of acts of general importance relating to public education, passed by the legislature of 1905.

379.15 *School supervision*

See also Section 371.2

- 606 **Allen, W. H.** School policy via school facts. (School rev. June. 13: 475-91.)

A presentation of the value and uses of school reports and statistics, with special reference to New York city.

Shows the need for more adequate information respecting the results of school policy.

- 607 **Bruce, W. G.** Recent progress in school administration. (In N. E. A. Proc. p. 828-31.)
Enumerates present tendencies and points out noteworthy changes made.
- 608 **Butterfield, K. L.** Rural education. (Amer. jour. of soc. Mar. 10: 615-19.)
Suggestions for solving the problem of the country school, and also for giving a better agricultural education.
- 609 **Mowry, Duane.** The board of education in large cities. (Educ. Oct. 26: 71-79.)
A plea for the elective school board, as against the appointive system.
- 610 **Roark, R. N.** Economy in education; a practical discussion of present-day problems of educational administration. 252 p. D. American book company, \$1.
"This book is the third in the series of which 'Psychology in education' is the first, and 'Method in education' is the second."—Pref.
"Economy in education, as a division of pedagogy, has to do with the conserving and directing of all the external influences which, combined with the innate self-activity of the pupil, produce the results we call right education. It means the careful and economical use of time, money and energy in equipping pupils to live their lives rightly." Author's preface. This book deals with the externals of the educative forces in the community and is divided under three heads. 1st. Organization and management of the individual school, or the individual teacher's work; 2d. The organization and administration of school systems, or the lawmaker's duty; 3d. Correlation and useful direction of the educative forces of the school and the community, or, both working reciprocally. Each topic is treated very definitely and the central idea of a paragraph is emphasized by heavier type. Frequent references given in footnotes point to further research. The keynote of the book seems to be utility and practicability. The author is Dean of the Department of Pedagogy at the Kentucky State College.
- 611 **Sanders, T. E.** Management and methods for rural and village teachers. 312 p. D. The C. J. Bell co., \$1.
- 612 **Wells, K. G.** Women on school boards. (No. Amer. rev. Sept. 181: 428-34.)
Suggestions for guidance and what they may do.

379.2 *Illiteracy*

- 613 **U. S.—Census, Bureau of.** Illiteracy in the United States. 54 p. Q. Government printing office, gratis. (U. S.—Dep't of Commerce and Labor. Bulletin 26.)
"A discussion and analysis of the statistics of illiteracy contained in the report of the Twelfth and preceding censuses, prepared under the supervision of Prof. W. F. Willcox, of Cornell University, Special agent of the Bureau of the Census." Many tables of statistics and diagrams on all phases of this subject illustrate and explain it, making the work very complete and valuable.

379.23 *Compulsory education*

- 614 **Cotton, F. A.** Compulsory education in Indiana. (In Nat. conference of char. and correction. Proceedings, 1904. p. 274-80.)
A glance at the history of compulsory education, at what has been done in Indiana, and why it is necessary.

- 615 **Giddings, F. H.** The social and legal aspect of compulsory education and child labor. (In N. E. A. Proc. p. 111-13.)
An abstract.
- 616 **Hand, W. H.** Some arguments for compulsory education. (In Conference for education in the south. Proceedings of the eighth annual conference, 1905. p. 77-83.)
Arguments made with especial reference to the South, of which but two states, West Virginia and Kentucky, have compulsory education laws. Direct and conclusive, the arguments being reinforced by comparative statistics.
- 617 **Martin, G. H.** Child labor and compulsory education,—the school aspect. (In N. E. A. Proc. p. 103-11.)
Social conditions described and viewed from the standpoint of "What is right for the child," and the question of his education considered.
- 618 **Perrin, J. W.** Compulsory education in New England, 1850-1890. (Jour. of ped. June. 17: 251-76.)
A history of compulsory education in Massachusetts.

379.5 *Secondary education in special countries*

Europe

- 619 **Henrotin, E. M.** Secondary education in Europe and the United States. (Educ. rev. Oct. 30: 231-42.)
A criticism of the educational exhibits at the St. Louis exposition. Gives some idea of the work done in the two places.
- 620 **Vanderlip, F. A.** Political problems of Europe as they interest Americans: 3rd paper. Government education. (Scribner's, Mar. 37: 338-53.)
Considers the need of education as seen by governments and shows the typical character of that undertaken in Germany, France, England and Switzerland.

France

- 621 **Education in France.** (In U. S.—Education, Comm'r of. Report for 1903. 1: 585-622.)

A survey of educational progress to 1902 by means of statistical summaries, and a detailed account of the various classes of schools which are included, in the French system, under the division of primary education. Contains a bibliography of previous articles on this subject found in former Reports.

Great Britain

- The British government publishes many important documents on education at home and in the colonies. A list of these may be had on application to the government printers Eyre and Spottiswoode, London.
- The great English "public schools" for boys are under 373. See also nos. 276 and 277.
- 622 **Adkins, F. J.** Tekel; a study of educational problems of the day. 242 p. D. Sonnenschein, 3s. 6d.
"On the whole, rather disappointing on account of its incompleteness and the journalistic style in which it is written. It is concerned chiefly with the faults of English elementary school methods." Schoolmasters' Yearbook. Much of the subject-matter has appeared in the *Saturday Review*, the *Journal of Education*, and the chapter on *Strengthening the foundations* is reprinted from the *Westminster Review* for Feb., 1905.

- 623 **Brereton, Cloudesley.** A comparison between English and French secondary schools. (*Jour. of educ.* Jan. 36: 27-29, Feb. 123-26.)
A brief comparison, discussing for the two countries, the relationships to the Central authority, the head masters, the organization of the teaching professions, internal economy and administration of the schools, examinations, degrees given, curricula, methods of teaching various subjects, and the characteristics of the English and of the French school boy.
- 624 **The direction and method of education.** (*Quarterly rev.* Jan. 202: 197-220.)
Deals with English education as molded and developed thru legislation.
- 625 **Education in Great Britain and Ireland—1903.** In U. S.—Education, Comm'r of. Report for 1903. 1: 227-71.)
Brief conspectuses of public elementary education, with detailed accounts of important current events and a statistical review showing progress since 1870. Includes also secondary, technical and university education.
- 626 **Egerton, Hakluyt.** The maintenance of denominational teaching: a note upon Section 7 (1) of the education act, 1902. 109 p. D. G. Allen. 1s. 6d. net.
An interpretation, discussion and argument of the question whether the Education act of 1902 enables or compels a Local education authority to "maintain" religious instruction in a non-provided, public, elementary school, deciding in the negative.
- 627 **Grant, E. H.** The education of the masses. (*Jour. of educ.* July. 36: 497-99.)
An outline of the improvident, careless life of the people, with suggestions as to how the school system is to blame for it.
- 628 **Macnamara, T. J.** The state and secondary education. (*Independent rev.* 6: 47-55.)
What little the state has done and what it ought to do, stated.
- 629 **O'Donovan, J.** The churches and the child. (*Independent rev.* Feb. 5: 78-89.)
A frank consideration of the claims of the Roman Catholic church to educate the child, as put forth in Great Britain, Ireland and the United States, and concluding that the Church ought to reconsider her position.
- 630 **Paton's list of schools and tutors, 1905-6.** 927 p. D. Paton, 1s. 6d.
Eighth annual edition. Bulletins of the schools are professedly advertisements, but few important schools are omitted. It justifies its title, "An aid to parents in the selection of schools."
- 631 **Schoolmasters' yearbook and directory 1905.** 558 p. D. Sonnenschein, 5s.
The third annual issue of an invaluable reference book of secondary education in England and Wales. Part 1, 456 gives among a mass of useful general information, a general review of the year; the personnel, organization and important acts of government administrative bodies; lists of educational societies, universities, colleges and medical schools; latest information on examinations and inspection; a somewhat scrappy bibliography, chiefly of English publications. Part 2 is an alphabetical list of secondary schools and schoolmasters. Brief information is included in this latter list of the English public schools which is, however, found in greater detail in the Public schools year-book. "A new feature of this book is particulars as to Minor Local Education Authorities."
- 632 **Varley, Telford.** Board of education regulations for secondary schools; from a head master's point of view. (*Jour. of educ.* Sept. 37: 638-41.)

Their application considered as to: 1. Mode of assessing grant, 2. mode of controlling schools, 3. financial basis of grant, 4. the effect on schools hitherto aided, 5. the effect on Local Authorities.

- 633 **Watson, Foster.** The educational situation in England, 1904. (School rev. Feb. 13: 105-26.)

Conditions presented as they are, with suggestions for lines of development or improvement. Contains also a bibliography for further study.

- 634 **Yoxall, J. H., and Gray, Ernest.** The New Code, 1905, of regulations for public elementary schools, with schedules, regulations for evening schools, etc. 416 p. O. Education Supply Assoc., 1s. net.

Contains laws in regard to various kinds of education and schools, training of teachers, building, health, religious education, &c.

- 635 **Birkenhead. Sadler, M. E.** Report on secondary education in Birkenhead; with chapters on the evening schools and technical classes, and on the training of teachers. 131 p. O. G. Philip, 1s. net.

A clear and comprehensive description of the educational system of this place written by an expert. Statistics of numbers in various schools, the courses of study, &c., are given, also accounts of the work being done with suggestions for improvements which make the report valuable and well worth careful study. All phases of educational work are considered.

- 636 **Derbyshire. Sadler, M. E.** Report on secondary and higher education in Derbyshire. 192 p. O. Bemrose.

- 637 **Exeter. Sadler, M. E.** Report on secondary and higher education in Exeter. 71 p. O. Western times.

- 638 **Hampshire. Sadler, M. E.** Report on secondary and higher education in Hampshire. 154 p. O. Holbrook, (Portsmouth.)

A detailed description of the work and prospects of the schools in this county, with some interesting preliminary remarks upon education in general. Figures showing the proportionate number of pupils to population are also included.

- 639 **Huddersfield. Sadler, M. E.** Report on secondary and technical education in Huddersfield. 126 p. O. Jubb, 1s.

- 640 **London. Education in London under the administration of the London school board.** (In U. S.—Education, Comm'r of. Report for 1903. 1: 273-92.)

A favorable survey of its work which was brought to a close by the new law outlined in Chapter 3 of this report.

- 641 **Newcastle-upon-Tyne. Sadler, M. E.** Report on secondary and higher education in Newcastle-upon-Tyne. 89 p. O. Newcastle-upon-Tyne education committee, 1s.

The outcome of an inquiry made by an expert into the condition of education in Newcastle-upon-Tyne. Contains a statistical survey and a detailed description of the recommendations and suggestions to fit the exact conditions, with a financial summary and estimate for carrying out the plans suggested.

Poland

- 642 **The boycott of the schools in Russian Poland.** (Rev. of rev. Sept. 32: 352-54.)

An exposition of present conditions and reasons for them.

Spain

- 643 **Moore, S. H.** Education in Spain. (*Jour. of educ.* June. 36:435-37.)

A description of present conditions.

United States

Matter on education in the separate states is arranged alphabetically under names of these states at the end of this general section.

See also nos. 51, 52, 63, 64, 65.

- 644 **Brown, E. E.** Secondary education. (In U. S.—Education, Comm'r of. Report for 1903. 1:553-83.)

An historical and statistical account of its origin, growth and present condition in the United States.

- 645 **Carman, G. N.** The secondary school in the Middle West. (*Educ. rev.* Mar. 29:286-93.)

A plea for the broadening of the curriculum, for the introduction of the elective system into the secondary schools, with reasons why people fear to do so.

- 646 **Draper, A. S.** Unsettled questions in the organization and administration of the schools. (*Lewis and Clark educ. cong.* p. 24-40.)

Local vs. central initiative and control; Distribution of state and local funds; Competent teaching and supervision; Large vs. small schools.

- 647 **Educational organization and progress in American cities;** a symposium on present educational conditions and needs. (*Annals of Amer. acad.* Jan. 25:157-88.)

Contains a digest of school laws; also a brief exposition of educational conditions in the following cities: New York, Chicago, Philadelphia, Boston, Baltimore, Cleveland, Buffalo, Cincinnati, Pittsburg, New Orleans, Milwaukee, Washington, Providence, Kansas City, Grand Rapids, Seattle, Duluth.

- 648 **Halleck, R. P.** Why do so many pupils leave the public high school during the first year? (*School rev.* Sept. 13:551-59.)

Read before the Department of secondary education at the meeting of the National educational association, July 4, 1905.

- 649 **Hammond, L. H.** Some aspects of Southern education. (*World to-day*, Aug. 9:832-36.)

Largely in regard to its resources, and the education of negro and white.

- 650 **Kern, O. J.** Phases of modern education. The consolidation of rural schools. (*Educ.* Sept. 26:14-26.)

A presentation of what has already been accomplished in various states, and of further needs. Includes statistics.

- 651 **Lang, O. H.** The educational outlook. (*Forum*, Jan.-Mar. 36:429-42; Apr.-June, 586-603; July-Sept. 37:69-84; Oct.-Dec. 259-71.)

Certain present-day problems, as course of study, time in school, adequate educational facilities, &c., considered with the view to their solution; also educational conditions and needs, especially in regard to New York city; correlation of studies; the teacher's ability, and a criticism or abstract of results in educational fields shown at the N. E. A. meeting at Asbury Park.

- 652 **Means of increasing the efficiency of our public-school work.** (In N. E. A. Proc. p. 180-94.)
 CONTENTS: Providing better teachers, by J. W. Carr.—Adequate leadership, progressive teachers and fewer subjects, by C. G. Pearse.—Changing the view-point, by W. I. Crane.
- 653 **Orcutt, H. M.** Children of immigrants in the public schools. (Outlook, Sept. 81: 74-78.)
 Deals largely with New York conditions, but shows the need for individual training, hence smaller classes for a teacher to handle.
- 654 **Patterson's college and school directory of the United States and Canada.** 559 p. O. Amer. educ. co., \$5.
 Edited by H. L. Patterson. Contains "a complete list and description of all the schools, colleges and other institutions of higher education; a list of college Greek letter fraternities, their chapters and where located; a list and description of college newspapers and publications; a list of college, theological, law, medical, state and public libraries, with name of librarian and number of bound volumes; also a list of the state and county superintendents of public instruction, city superintendents, high school and graded high school principals, together with much other information embodying a complete educational directory." Subdivided largely by states.
- 655 **Richman, Julia.** The immigrant child. (In N. E. A. Proc. p. 113-21.)
 A presentation of conditions caused by our immigrants, and especially as they affect our schools. The problem discussed of how best to reach the children and train them into American citizens.
- 656 **Robson, E. S. A.** Report of a visit to American educational institutions. 174 p. O. Sherratt & Hughes, 1s. net.
 An instructive general account of education in the United States. Statistics of attendance, teachers' salaries, &c., are also given. The author sees much to admire, especially in the organization of the secondary school systems and in the technical instruction, but feels that our teachers are inadequately paid, that athletics are being overdone and that the weak point in university education is that any place may call itself a university, and grant degrees.
- 657 **Rogers, H. J.** Education in reference to our future industrial and commercial development. (Lewis and Clark educ. cong. p. 102-13.)
 Why cannot our secondary schools do as much or even more than European trade, technical and industrial schools? We must, both as a good business investment and for better citizenship.
- 658 **Showerman, Grant.** Eastern education thru Western eyes. (Educ. rev. Dec. 30: 474-87.)
 The impression of the educational system of the East received by a Western born and Western educated professor, after a year spent in a professor's chair in the East.

Illinois

- 659 **Riley, T. J.** The higher life of Chicago. 136 p. O. University of Chicago press.
 CONTENTS: Pt. I. The educational interests of Chicago.—Pt. II. The normal and social interests of Chicago.—Pt. III. The æsthetic and religious interests of Chicago.—Pt. IV. Appendix: tab. 1. Women's clubs in Chicago. tab. II. Social settlements in Chicago. tab. III. Charities in Chicago.
 As a compendium of the facts relating to the varied activities included above, this book is of much value both for reference and for further stimulation of cultural and altruistic endeavor. Dial.

Indiana

- 660 **Hedgepeth, B. W. B.** The six-year high-school plan at Goshen, Ind. (School rev. Jan. 13:19-23.)
 Read at the 18th Educational Conference, held Nov., 1904, at the University of Chicago.
 A brief statement of the reasons for adopting the plan, and of what has been done.

New York City

- 661 **Canfield, Dorothy.** A model city school. World's work, July 10: 6418-22.)
 The work done by Horace Mann school in New York with scientific methods of teaching described.
- 662 **Johnson, C. C.** What the public schools achieve. (World's work, July. 10:6365-73.)
 From the business point of view. Shows the practical results from the training given in various branches in New York schools.
- 663 **Palmer, A. E.** The New York public school; being a history of free education in the city of New York, authorized by the Board of education; introduction by Seth Low. 440 p. O. Macmillan, \$1.
 Bibliography: p. xxi-xxii.
 Written by the secretary of the New York school board and authorized by the Board.

Ohio

- 664 **Burns, J. J.** Educational history of Ohio; a history of its progress since the formation of the state, together with the portraits and biographies of past and present state officials. 756 p. Q. Columbus, O., Historical publishing co., \$5.
- 665 **An educational policy for Ohio.** (Jour. of ped. Dec. 18:113-22.)
 Conditions in Ohio described, criticised, and suggestions for improvement made.

AUTHOR INDEX

The numbers refer to item, not to page. Anonymous books and articles, and periodical titles, are not entered, but entries are made for authors of reviews and for the names of persons about whom articles or books are written. For subject arrangement see scheme of classification at the beginning.

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III

COLLEGE ENTRANCE EXAMINATION BOARD

SIXTH ANNUAL REPORT OF THE SECRETARY

THE EXAMINATIONS OF 1906

Organization

At the sixth annual meeting of the College Entrance Examination Board, held at Columbia University, New York, November 11, 1905, President Butler of Columbia University was elected chairman; Dean Crane of Cornell University was elected vice-chairman; and Professor Fiske of Columbia University was elected secretary and treasurer. Dean Pendleton of Wellesley College, President Thwing of Western Reserve University, and Mr. Farrand of the Newark Academy were elected to serve with the chairman and vice-chairman as members of the executive committee.

At the same meeting Williams College was by a unanimous vote admitted to membership in the Board, making the total membership of the Board twenty-eight universities and colleges and seven secondary-school representatives.

A committee was appointed to consider and report at the next meeting of the Board as to what standard, if any, should be fixed for admission to membership in the Board, and it was referred to the same committee to consider and report as to the desirability of establishing dues of membership to be paid annually by the colleges and universities belonging to the Board. At the meeting of the Board held April 21, 1906, the committee made a report recommending the establishment of a definite standard for admission to membership in the Board, and recommending that annual dues of one hundred dollars be imposed on every college holding membership in the Board, said fees to be used primarily for promoting greater efficiency in the conduct of the examinations. The recommendations of the

Committee were made a special order for the next meeting of the Board, which will be held on November 10, 1906.

Publications In addition to the publications mentioned in previous reports of the secretary, the following have been issued to date:

FIFTH ANNUAL REPORT OF THE SECRETARY, ... SEPTEMBER 1, 1905

This report, published in the *EDUCATIONAL REVIEW* for October, 1905, was printed also separately for free distribution among those interested in the work of the Board. It gives an account of the operations of the Board during the fifth year of its existence and is accompanied by statistical tables showing in detail the more important results of the examinations. It contains a list of all the secondary schools that have prepared candidates for the Board's examinations during the years 1901 to 1905.

DOCUMENT No. 24, ... OCTOBER 2, 1905

List of examiners for 1906.

DOCUMENT No. 25, ... DECEMBER 1, 1905

This document contains the constitution of the Board, the list of subjects in which examinations were offered in 1906, and detailed definitions of the requirements in each subject. A copy of this document will be sent to any address upon receipt of ten cents in postage stamps.

EXAMINATION QUESTIONS IN LATIN AND GREEK, 1901-1905,

DECEMBER 1, 1905

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for forty cents a copy. If it is ordered from Ginn & Company direct, the mailing price is fifty cents. It contains all the examination questions in Latin and Greek, set at the examinations from the establishment of the Board to 1905 inclusive. The volume contains 162 pages.

EXAMINATION QUESTIONS IN ENGLISH, GERMAN, FRENCH AND SPAN-

ISH, 1901-1905, ... DECEMBER 1, 1905

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for thirty cents a copy. If it is ordered from Ginn & Company direct, the mailing price is thirty-five cents. It contains all the examination questions in English, German, French and Spanish set at the examinations from the establishment of the Board to 1905 inclusive. The volume contains 97 pages.

EXAMINATION QUESTIONS IN MATHEMATICS, 1901-1905,

DECEMBER 1, 1905

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for twenty-five cents a copy. If it is ordered from Ginn & Company direct, the mailing price is thirty cents. It contains all the examination questions in mathematics set at the examinations from the establishment of the Board to 1905 inclusive. The volume contains 70 pages.

EXAMINATION QUESTIONS IN HISTORY, 1901-1905, . . . DECEMBER 1, 1905

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for twenty-five cents a copy. If it is ordered from Ginn & Company direct, the mailing price is thirty cents. It contains all the examination questions in history set at the examinations from the establishment of the Board to 1905 inclusive. The volume contains 71 pages.

EXAMINATION QUESTIONS IN BOTANY, DRAWING, CHEMISTRY, GEOGRAPHY AND PHYSICS, 1901-1905, . . . DECEMBER 1, 1905

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for twenty cents a copy. If it is ordered from Ginn & Company direct, the mailing price is twenty-five cents. It contains all the examination questions in botany, drawing, chemistry, geography and physics set at the examinations from the establishment of the Board to 1905 inclusive. The volume contains 51 pages.

DOCUMENT No. 26, . . . JANUARY 1, 1906

Instructions to supervisors in charge of examinations.

DOCUMENT No. 27, . . . APRIL 12, 1906

List of places at which arrangements were made for holding examinations, June 18-23, 1906.

EXAMINATION QUESTIONS OF 1906, . . . AUGUST 31, 1906

This volume, published for the Board by Ginn & Company, may be obtained thru any bookseller for sixty cents a copy. If it is ordered from Ginn & Company direct, the mailing price is seventy cents. It contains all the examination questions of 1906, together with the names of the examiners who framed the questions in each subject and the readers who rated the answer-books in each subject. It includes also the time schedule of the examinations of 1906, and a brief account of the plan of organization and aims of the Board.

The time-schedule of examinations which went into operation this year, made it necessary to provide for a number of examinations in which two examinations already established were combined. For example, in June, 1906, the following examinations were held:

* Latin *dq.* Virgil—*Æneid*, Books I-VI, and sight translation of Latin Poetry.

Greek *ch.* Homer—*Iliad*, Books I-III, and sight translation from Homer.

French *bc.* Intermediate and advanced French.

German *bc.* Intermediate and advanced German.

Mathematics *cd.* Plane and solid geometry.

At the examinations it became apparent that there is a distinct demand also for an additional examination

Latin *be.* Cæsar—*Gallic War*, Books I-IV, and Nepos—First 15 *Lives*.

As in previous years, the applications for examination that were filed at the last moment testified in a striking way to the spirit of procrastination that characterizes the human race. Of the 2432 candidates examined this year, 1068 filed applications on the last two days allowed by the regulations, and 175 paid the fee of five dollars required in the case of belated applications. As a result, more than half of the applications had to be handled at a period when the pressure of business was heaviest.

A number of letters were received from New England schools protesting that the week in which the Board's examinations are held has been chosen most unfortunately. However, any change in the time of the examinations would undoubtedly bring out equally strong, or even stronger protests from other sections of the country.

Upon the recommendation of the examiners in chemistry, the form of teacher's certificate required in connection with laboratory note-books in chemistry was modified. The certificate will in future contain the following statement:

The attention of the teacher signing this certificate is called to the fact that a satisfactory laboratory note-book in chemistry must contain:

- (1) A brief description in the pupil's own words of the materials and apparatus employed and the operations performed in each experiment, sketches being used to represent apparatus where this is practicable;

- (2) Records in the pupil's own words of phenomena as actually observed in the course of each experiment;

- (3) A statement of the important conclusions which may properly be drawn from the phenomena as observed.

Special importance will be attached to the evidences which the note-book affords of independent and careful thought on the part of the pupil, as indicated by ability to recognize and express clearly the significance of the work actually performed. Statements which have been merely transcribed from text-books or manuals will not be accepted as satisfactory.

The body of the certificate will read as follows:

I certify that this note-book is a true record of laboratory exercises in chemistry actually performed by.....in connection with a course in the subject of chemistry at the.....school during the year..... These notes have been inspected and corrected

by a competent instructor and the pupil has been required to pay proper attention to such corrections.

At the meeting of the Board held April 21, 1906, the Board appointed a committee of five to consider and report at the next meeting upon the best method of making such changes and modifications in the definitions of entrance requirements as may from time to time become desirable, and the secretary was requested to lay before this committee for its consideration any communications relative to changes in the requirements that might be in his hands, or that might be received by him before the next meeting of the Board.

**New Examination
Subjects**

At the meeting held November 11, 1905, the Board adopted a requirement in zoölogy, and at the meeting held April 21, 1906, it adopted a requirement in music. Examinations will be held in these subjects for the first time in June, 1907. The requirement in zoölogy was recommended to the Board by a committee of the American Society of Zoölogists; that in music was recommended by a joint committee representing the Eastern Educational Music Conference and the New England Education League.

**Award of Competi-
tive Scholarships**

A number of competitive scholarships were as usual awarded on the basis of the Board's examinations. Among them were the Pulitzer scholarships awarded to students of the high schools of New York City, the scholarships awarded to candidates for admission to the Freshman classes of Columbia College and Barnard College, the competitive scholarship offered by the Intercollegiate Association of Memphis, and a scholarship established by the Wellesley Club of Philadelphia.

The highest average percentage received by a candidate for a competitive scholarship was 90 per cent. which was obtained by Mr. Adolph C. Meyer, of the Morris High School, a candidate for a Pulitzer scholarship. The Memphis Intercollegiate scholarship was won by Miss Ruth G. Williford, of the Misses Thomas's School. The scholarship offered by the Wellesley Club of Philadelphia was won by Miss Edith H. Murphy, of Miss Hills's School.

Examiners

The full list of examiners for 1906 was as follows:

BOTANY

- William Francis Ganong.....Professor of Botany, Smith College
University of New Brunswick, B.A., 1884, and M.A., 1886; Harvard University, A.B., 1887; University of Munich, Ph.D., 1894
- Henrietta Edgecomb Hooker, Professor of Botany, Mount Holyoke College
Syracuse University, Ph.B., 1888, Ph.M., 1888, and Ph.D., 1888
- Louis Murbach, Teacher of Biology, Central High School, Detroit, Mich.
University of Michigan, Ph.B., 1889, and B.S., 1890; University of Leipzig, Ph.D., 1894

CHEMISTRY

- Henry Paul Talbot, Professor of Inorganic and Analytical Chemistry, Massachusetts Institute of Technology
Massachusetts Institute of Technology, S.B., 1885; University of Leipzig, Ph.D., 1890
- Louis Munroe Dennis, Professor of Inorganic Chemistry, Cornell University
University of Michigan, Ph.B., 1885, and B.S., 1886
- Charles Morse Allen, Instructor in Chemistry, Pratt Institute, Brooklyn, N. Y.
Wesleyan University, B.A., 1882, and M.A., 1886

DRAWING

- Ralph Edward Mayer, Adjunct Professor of Mechanical Drawing, Columbia University
Columbia University, C.E., 1879
- Charles Laban Adams, Associate Professor of Drawing and Descriptive Geometry, Massachusetts Institute of Technology
- Manton Elwell Merchant, Teacher of Drawing, Erasmus Hall High School, Brooklyn, N. Y.

ENGLISH

- Byron Satterlee Hurlbut, Assistant Professor of English, Harvard University
Harvard University, A.B., 1887, and A.M., 1888
- Laura Johnson Wylie.....Professor of English, Vassar College
Vassar College, A.B., 1877; Yale University, Ph.D., 1894
- Theodore C. Mitchell, Teacher in the Boys' High School, Brooklyn, N. Y.
Columbia University, A.B., 1886, and A.M., 1901

FRENCH

- Adolphe Cohn, Professor of the Romance Languages and Literatures, Columbia University
University of Paris, A.B., 1868, LL.B., 1873, and A.M., 1874
- Charles Hall Grandgent, Professor of Romance Languages, Harvard University
Harvard University, A.B., 1883

Louise Guebin, Teacher in the Packer Collegiate Institute, Brooklyn, N. Y.

GEOGRAPHY

Albert Perry Brigham, Professor of Geology and Natural History, Colgate University

Colgate University, A.B., 1879, and A.M., 1882; Harvard University, A.M., 1892

Florence Bascom, Associate Professor of Geology, Bryn Mawr College
University of Wisconsin, B.A., and B.L., 1882, B.S., 1884, and M.A., 1887;
The Johns Hopkins University, Ph.D., 1893

William Henry Snyder, Teacher of Science, Worcester Academy, Worcester, Mass.

Colby College, A.B., 1885; Harvard University, A.M., 1888

GERMAN

Hermann Collitz, Professor of Comparative Philology and German, Bryn Mawr College

University of Göttingen, A.M., and Ph.D., 1879

Frank Vogel, Professor of Modern Languages, Massachusetts Institute of Technology

Harvard University A.B., 1887, and A.M., 1892

Thomas Stockham Baker, Professor of German, The Jacob Tome Institute, Port Deposit, Md.

The Johns Hopkins University, A.B., 1891, and Ph.D., 1895

GREEK

Herbert Weir Smyth, Eliot Professor of Greek Literature, Harvard University

Swarthmore College, A.B., 1876; Harvard University, A.B., 1878; University of Göttingen, Ph.D., 1884

Edward Henry Spieker, Associate Professor of Greek and Latin, The Johns Hopkins University

The Johns Hopkins University, A.B., 1879, and Ph.D., 1882

Allen Rogers Benner, Professor of Greek, Phillips Academy, Andover, Mass.

Harvard University, A.B., 1892

HISTORY

William Mac Donald.....Professor of History, Brown University
Harvard University, A.B., 1892; Union University, Ph.D., 1895; University of New Brunswick, LL.D., 1900

Marshall Stewart Brown, Professor of History and Political Science, New York University

Brown University, Ph.B., 1892, and M.A. 1893

Elizabeth Briggs, Teacher of History, Dr. Sachs's School for Girls, New York, N. Y.

Graduate of Harvard Annex, 1887; Cornell University, A.M., 1891

LATIN

Kirby Flower Smith, Professor of Latin, The Johns Hopkins University
University of Vermont, A.B., 1884; The Johns Hopkins University, Ph.D., 1889

Nelson Glenn McCrea.....Professor of Latin, Columbia University
Columbia University, A.B., 1885, A.M., 1886, and Ph.D., 1888

John Tetlow, Headmaster of the Girls' High and Latin Schools, Boston, Mass.

Brown University, A.B., 1864, A.M., 1879, and D.Sc., 1893

MATHEMATICS

Frank Nelson Cole. Professor of Mathematics, Columbia University
Harvard University, A.B., 1882, A.M. and Ph.D., 1886

Henry Seely White. Professor of Mathematics, Vassar College
Wesleyan University, B.A., 1882; University of Göttingen, Ph.D., 1890

Arthur Schultze, Teacher of Mathematics, The High School of Commerce, New York, N. Y.
University of Kiel, Ph.D., 1887

PHYSICS

Edward Leamington Nichols. Professor of Physics, Cornell University
Cornell University, B.S., 1875; University of Göttingen, Ph.D., 1879

Francis Cuyler Van Dyck, Professor of Physics and Experimental Mechanics, Rutgers College
Rutgers College, A.B., 1865, and A.M., 1868; Union University, Ph.D., 1888

Frank Rollins, Principal of the Stuyvesant High School, New York, N. Y.
Wesleyan University, A.B., 1889; Columbia University, Ph.D., 1902

SPANISH

Hugo Albert Rennert, Professor of Romance Languages and Literatures, University of Pennsylvania
University of Pennsylvania, B.Sc., 1876, LL.B., 1881, and M.A., 1890; University of Freiburg, Ph.D., 1892

Fonger DeHaan. Associate Professor of Spanish, Bryn Mawr College
The Johns Hopkins University, Ph.D., 1895

Camille Fontaine, Teacher of Romance Languages, The High School of Commerce, New York, N. Y.
University of Paris, B.L., 1874, B.D., 1876, and L.D., 1877

The examinations were held during the week
The Examinations beginning Monday, June 18, in accordance with the time schedule printed on pages 4 and 5 of Document No. 23. The total number of candidates examined was 2432, an increase of 355 over the number examined in 1905.

The candidates attending the Board's examinations in the years 1901-1906 inclusive, if classified according to the points at which they were examined, were as indicated in the following table:

	NEW ENGLAND	MIDDLE STATES	SOUTH AND WEST	FOREIGN
1901.	81	812	76	4
1902.	147	1026	175	14
1903.	224	1115	274	7
1904.	292	1249	257	19
1905.	387	1345	328	17
1906.	564	1493	369	6

Classified according to residence, the candidates were as indicated in the following table:

	NEW ENGLAND	MIDDLE STATES	SOUTH AND WEST	FOREIGN	NOT STATED
1901....	48	814	101	6	4
1902....	118	1007	218	17	2
1903....	204	1062	337	7	10
1904....	248	1254	288	20	7
1905....	314	1344	385	30	4
1906....	457	1489	464	12	10

Classified according to the institutions that they expected to enter, the candidates were as indicated in the following table:

	NEW ENGLAND	MIDDLE STATES	SOUTH AND WEST	CANADA	NOT STATED
1901....	78	819	3	0	73
1902....	152	1046	25	0	139
1903....	314	1183	14	0	109
1904....	436	1247	30	0	104
1905....	553	1343	40	1	140
1906....	884	1291	37	2	218

The examinations were held in 1906 at 140 points, of which four were in Europe, as shown in the following table:

TABLE IV

PLACES AT WHICH EXAMINATIONS WERE HELD JUNE 18-23, 1906, AND THE NUMBER OF CANDIDATES EXAMINED AT EACH PLACE

NORTH ATLANTIC DIVISION

Massachusetts:

Maine:		Beverly	7
Eastport	0	Boston	98
Old Town	2	Dalton	5
Portland	38	Duxbury	11
Waterville	1	Gloucester	9
	— 41	Great Barrington	12
		Groton	5
New Hampshire:		Lowell	5
Berlin	2	Mount Hermon	2
Concord	18	New Bedford	11
Exeter	13	Norwood	12
Keene	9	South Hadley	22
	— 42	Springfield	56
		Ware	8
Vermont:		Wellesley	25
Burlington	2	Williamstown	24
		Worcester	12

Massachusetts:

Andover

— 333

Rhode Island:		Pennsylvania:	
Providence	8	Bethlehem	3
Connecticut:		Erie	1
Bridgeport	21	Lancaster	10
Danbury	8	Mercersburg	10
Hartford	18	Pennsburg	1
Lakeville	6	Philadelphia	48
New Haven	33	Pottstown	61
Stamford	27	Reading	4
Torrington	6	Scranton	1
Washington	19	Warren	2
	— 138	Wayne	29
New York:		Wilkes-Barre	7
Albany	30		— 200
Binghamton	3		
Brooklyn	105	SOUTH ATLANTIC DIVISION	
Buffalo	24	Delaware:	
Dobbs Ferry	7	Wilmington	3
Elmira	4		
Gloversville	4	Maryland:	
Hudson	3	Baltimore	12
Ithaca	44		
Lake Placid	1	District of Columbia:	
New York University	33	Washington	30
Columbia University	532		
Barnard College.....	222	North Carolina:	
Ossining	9	Asheville	8
Poughkeepsie	39		
Rochester	9	Georgia:	
Schenectady	2	Atlanta	4
Syracuse	2	Savannah	3
Tarrytown	3		— 7
Utica	7		
Watertown	2		
Yonkers	21	SOUTH CENTRAL DIVISION	
	— 1106	Kentucky:	
New Jersey:		Louisville	8
Asbury Park	13		
Bordentown	15	Tennessee:	
Jersey City	10	Memphis	13
Newark	79	Nashville	1
New Brunswick	5		— 14
Paterson	13		
Plainfield	26	Alabama:	
Princeton	20	Mobile	0
Trenton	3	Montgomery	1
	— 184		— 1
Pennsylvania:		Louisiana:	
Allegheny	23	New Orleans	2

Texas:

Austin	1
Dallas	6
El Paso	3
Houston	0
—	10

Arkansas:

Little Rock	13
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NORTH CENTRAL DIVISION

Ohio:

Akron	11
Cincinnati	19
Cleveland	14
Columbus	5
Dayton	3
Toledo	1
Youngstown	12
—	65

Indiana:

Fort Wayne	1
Indianapolis	9
Lima	21
—	31

Illinois:

Chicago	43
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Michigan:

Detroit	10
Grand Rapids	0
Saginaw W. S.	1
—	11

Wisconsin:

Eau Claire	0
Milwaukee	13
—	13

Minnesota:

Duluth	3
Minneapolis	7
—	10

Iowa:

Burlington	4
Des Moines	3
Dubuque	0
Sioux City	1
—	8

Missouri:

Kansas City	6
St. Louis	15
—	21

South Dakota:

Aberdeen	3
Sioux Falls	4
—	7

Nebraska:

Omaha	2
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Kansas:

Lawrence	1
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WESTERN DIVISION

Montana:

Butte	2
Helena	3
—	5

Colorado:

Denver	6
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Utah:

Ogden	1
Salt Lake City	8
—	9

Washington:

Tacoma	0
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Oregon:

Portland	10
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California:

Belmont	1
Los Angeles	13
San Mateo	3
—	17

INSULAR TERRITORIES AND DEPENDENCIES

Hawaii:

Honolulu	5
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FOREIGN

England:	
London	2

France:		Switzerland:	
Paris	0	Geneva	2
Germany:			2432
Dresden	2		

The following table classifies the candidates for examination according to residence:

TABLE V

CANDIDATES FOR EXAMINATION CLASSIFIED ACCORDING TO RESIDENCE

NORTH ATLANTIC DIVISION		Minnesota	13
Maine	42	Iowa	10
New Hampshire	18	Missouri	25
Vermont	7	North Dakota	1
Massachusetts	285	South Dakota	7
Rhode Island	6	Nebraska	2
Connecticut	99	Kansas	4
New York	1086		— 264
New Jersey	251		
Pennsylvania	146		
	— 1940	WESTERN DIVISION	
		Montana	6
		Wyoming	1
		Colorado	9
		New Mexico	2
		Arizona	0
		Utah	12
		Nevada	1
		Idaho	1
		Washington	1
		Oregon	11
		California	19
			— 63
	— 78		
SOUTH ATLANTIC DIVISION		INSULAR TERRITORIES, AND DEPEND-	
Delaware	6	ENCIES	
Maryland	18	Hawaii	6
District of Columbia ...	32	Porto Rico	1
Virginia	7		— 7
West Virginia	1		
North Carolina	2		
South Carolina	1		
Georgia	8		
Florida	3		
	— 78		
		FOREIGN	
		Canada	4
		Cuba	1
		England	1
		Germany	2
		Mexico	1
		Panama	1
		Argentine Republic ...	2
			— 12
	— 58		
		Residence not stated	10
			—
			2432
NORTH CENTRAL DIVISION			
Ohio	77		
Indiana	34		
Illinois	58		
Michigan	16		
Wisconsin	17		

The following table classifies the candidates for examination according to age:

TABLE VI

CANDIDATES FOR EXAMINATION CLASSIFIED ACCORDING TO AGE

AGE		
Thirteen	years.....	2
Fourteen	"	16
Fifteen	"	135
Sixteen	"	410
Seventeen	"	713
Eighteen	"	610
Nineteen	"	320
Twenty	"	122
Twenty-one	"	38
Twenty-two	"	24
Twenty-three	"	10
Twenty-four	"	4
Twenty-five	"	4
Twenty-six	"	3
Twenty-seven	"	1
Twenty-eight	"	1
Thirty	"	2
Thirty-four	"	1
Forty-three	"	1
Fifty-six	"	1
Age not stated		14

2432

The following table shows the several colleges and scientific schools to which the candidates for examination declared themselves to be seeking admission:

TABLE VII

INSTITUTIONS TO WHICH ADMISSION WAS SOUGHT BY CANDIDATES FOR EXAMINATION

Amherst College	4
Bates College	1
Biltmore Forestry School	1
Boston University	3
Brooklyn Polytechnic Institute	1
Brown University	7
Bryn Mawr College	25
Carleton College	1
Case School of Applied Science	2
Colby College	2
Colgate University	1

Columbia University:

Columbia College	198	
Schools of Applied Science	228	
Barnard College	171	
Teachers College	11	
College of Physicians and Surgeons	30	
Law School	2	
School of Architecture	12	
College of Pharmacy	2	
Department not stated	33	
Columbia Students	37	724

Cornell University:

Academic Department	45	
Technical Schools	207	
Medical School	5	
Law School	4	
Department not stated	27	
Cornell Students	5	293

Dartmouth College	8	
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Hamilton College	1	
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Harvard University	104	
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Harvard Students	4	108
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Johns Hopkins University	1	
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Lehigh University	4	
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Leland Stanford, Jr., University	7	
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Massachusetts Institute of Technology	94	
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Mount Holyoke College	118	
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McGill University	2	
-------------------------	---	--

New York Normal College	1	
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New York Training School for Teachers	3	
---	---	--

New York University:

University College	3	
School of Applied Science	7	
Medical School	1	
Department not stated	4	15

Ohio State University	1	
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Princeton University:

Princeton College	16	
Green Scientific School	25	
Department not stated	8	49

Purdue University	5	
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Radcliffe College	5	
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Rutgers College	1	
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Smith College	122	
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Stevens Polytechnic Institute	1	
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Syracuse University	1	
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Trinity College (Hartford)	2	
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Tufts College	2	
---------------------	---	--

Union University	5	
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University of California	5	
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" " Chicago	1	
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University of Maine	1	
" " Michigan	1	
" " Pennsylvania	7	
" " Rochester	1	
" " Virginia	1	
" " Wisconsin	2	
Vanderbilt University	1	
Vassar College	157	
Vassar College Students	1	158
Washington and Lee University	1	
Wellesley College	165	
Wesleyan University	1	
Western College for Women	1	
Williams College	112	
Woman's College of Baltimore	3	
Worcester Polytechnic Institute	2	
Yale University:		
Academic Department	68	
Sheffield Scientific School	49	
Department not stated	12	129
Preference not stated		219
		2432

The following table classifies the candidates for examination according to the institution last attended:

TABLE VIII

CANDIDATES FOR EXAMINATION CLASSIFIED ACCORDING TO SCHOOLS

NORTH ATLANTIC DIVISION

Maine:

Biddeford	High School	1
Oldtown	High School	2
Portland	Deering High School	9
	Portland High School	15
	Waynflete School	5
	Westbrook Seminary	2
Waterville	Coburn Classical Institute	1
Woodfords	Deering High School	1

New Hampshire:

Berlin	High School	2
Concord	High School	1
	St. Paul's School	12
Contoocook	Hopkinton High School	1
Exeter	Phillips Exeter Academy	11
Keene	High School	5
	Tilden's (Miss) Home School	1
Kingston	Sanborn Seminary	1
Manchester	High School	2
Plymouth	High School	1

Vermont:

Bellows Falls	High School	3
Burlington	University of Vermont.....	1

Massachusetts:

Amherst	"Fairholme"	1
Andover	Phillips Academy	10
Ashburnham	Cushing Academy	1
Athol	High School	1
Attleboro	High School	3
Beverly	High School	2
Bolton	Houghton High School	2
Boston	Bellow's (Mr. and Mrs. J. A.) School for Girls	1
	Boston Normal School	1
	Brown's (Miss) Classical School	1
	Church's (Miss) School	1
	Elm Hill School	5
	Girls' High School	2
	Haskell's (Miss) School	2
	Linfield School	1
	May's (Misses) School	1
Bourne	High School	1
Bradford	Bradford Academy	2
Braintree	High School	2
Bridgewater	State Normal School.....	1
Cambridge	Berkeley Street School	1
	Cambridge Latin School	3
	Lee School	2
	Manter Hall	12
Canton	High School	1
Chicopee	High School	2
Concord	Concord School	2
	High School	4
Dalton	High School	4
Deerfield	Deerfield Academy	1
Duxbury	Powder Point School	12
East Hampton	Williston Seminary	4
Essex	High School	1
Fairhaven	High School	3
Foxboro	High School	1
Gloucester	High School	8
Grafton	High School	1
Great Barrington	Searles High School	8
Greenfield	High School	2
	Prospect Hill School	2
Groton	High School	5
Hadley	Hopkins High School	3
Hanover	High School	2
Hingham	High School	1
Holyoke	High School	23

Leicester	Leicester Academy	3
Lowell	High School	1
Lynn	Lynn Classical High School	1
Malden	Oxford School	1
Manchester	High School	1
Medford	High School	1
	Tufts College	1
Milford	High School	4
Millis	High School	1
Milton	Milton Academy	1
Montague	High School	1
Mount Hermon	Mount Hermon School	2
Natick	Walnut Hill School	14
New Bedford	High School	5
	Mosher Home Preparatory School	2
Newton	Mt. Ida School	1
Newtonville	Newton High School	4
North Adams	Drury High School	1
	North Adams Normal School	1
North Andover	Johnson High School	4
Northampton	Burnham School for Girls	1
	High School	10
Northfield	Northfield Seminary	2
Norton	High School	1
	Wheaton Seminary	4
Norwood	High School	5
Peabody	High School	1
Pittsfield	High School	3
	Hall School for Girls	3
Quincy	High School	1
Randolph	Stetson High School	1
Roxbury	High School	1
Salem	Classical and High School	2
Saugus	High School	1
Sharon	High School	2
South Braintree	Thayer Academy	3
Springfield	Central High School	20
	MacDuffie School	1
	Mechanic Arts High School	1
Swampscott	High School	4
Taunton	High School	1
Waltham	High School	2
	New-Church School	1
Ware	High School	8
Watertown	Cambridge Country School	2
Wellesley	Dana Hall	8
Wellesley Hills	Wellesley High School	2
West Boylston	High School	1
Westfield	High School	2
West Springfield	High School	1
Whitman	High School	1

Williamstown	High School	1
	North Side College Preparatory School	7
Winchester	High School	3
Winthrop	High School	4
Worcester	Classical High School	2
	South High School	1
	West Classical High School	1
	Worcester Academy	1
Wrentham	High School	3
Rhode Island:		
Newport	St. George's School	3
Providence	Lincoln School	1
	Sacred Heart Convent	1
Connecticut:		
Ansonia	High School	3
Bethel	High School	1
Bridgeport	Chase School for Boys.....	1
	Courtland School	6
	High School	12
Cheshire	Cheshire School	12
Danbury	High School	8
Farmington	Porter's (Miss) School	4
Glastonbury	High School	2
Greenwich	Greenwich Academy	1
	Rosemary Hall	1
Hartford	High School	4
Lakeville	Hotchkiss School	7
Naugatuck	High School	6
New Britain	Public High School	1
New Haven	High School	4
	Johnstone's (Miss) School	8
	University School	1
	Yale Medical School	1
Seymour	High School	1
Simsbury	Westminster School	1
South Manchester	High School	2
Stamford	Betts Academy	12
	Katherine Aiken School	1
	Manor School	13
Suffield	Suffield Literary Institution	1
Thompsonville	Enfield School	1
Torrington	High School	6
Wallingford	Choate School	4
Washington	Gunnery School	13
	The Ridge	4
	Wykeham Rise	1
Waterbury	Crosby High School	1
	Waterbury High School	1

Watertown	Taft School	2
Westport	Staples High School	1
Willimantic	Windham High School	1

New York:

Albany	Albany Academy	16
	Albany Female Academy	1
	Fenimore Cooper's School	2
	High School	2
	St. Agnes' School	2
Amsterdam	High School	1
Aurora	Somes' School	1
Binghamton	High School	1
Brewster	High School	1
Brockport	State Normal School	2
Brooklyn	Adelphi Academy	7
	Boys' High School	28
	Brooklyn Latin School	1
	Commercial High School	2
	Eastern District High School	7
	Erasmus Hall High School	10
	Girls' High School	6
	Hefley Preparatory School	2
	Manual Training School	7
	Packer Collegiate Institute	7
	Polytechnic Institute	1
	Polytechnic Preparatory School	16
	Prospect Heights School	2
	Public School 86	1
Buffalo	Buffalo Seminary	1
	Central High School	2
	Franklin School	2
	Heathcote School	2
	Lafayette High School	8
	Masten Park High School	1
	Nicholas School	3
Canisteo	High School	1
Cherry Valley	High School	1
Cohoes	Egbert High School	3
Corning	Corning Free Academy	1
Dobbs Ferry	Mackenzie School	7
Ellenville	High School	1
Elmhurst	Newton High School	2
Far Rockaway	High School	4
Florida	S. S. Seward Institute	2
Flushing	Flushing Seminary	1
	High School	8
Fredonia	State Normal School	1
Freeport	High School	1
Garden City	St. Mary's School	1
	St. Paul's School	3

Gilbertville	High School	2
Gloversville	High School	2
Hudson	High School	2
Huntington	High School	1
Ithaca	Cascadilla School	19
	High School	10
	Stiles's Preparatory School	1
	University Preparatory School	9
Jamaica	High School	6
	State Normal School	1
Kingston	Kingston Academy	2
Lawrence	High School	1
	Lawrence School	1
Long Island City	Bryant High School	2
Malone	Franklin Academy	1
Mamaroneck	High School	1
Mohegan	Mohegan Lake School.....	4
Mt. Vernon	High School	5
New Brighton	Botsford's (Miss) School for Girls.....	2
	Curtis High School	6
	Staten Island Academy	2
Newburgh	Newburgh Academy	1
New Hartford	High School	1
New Rochelle	High School	6
New York	Alcuin School	3
	Barnard School for Boys	6
	Barnard School for Girls.....	3
	Berkeley School	6
	Blake School	2
	Brearley School	2
	Browning School	1
	Chapin Collegiate School	2
	Charleton School	1
	Chase Preparatory School	2
	College of the City of New York	14
	Collegiate School	21
	Columbia College	1
	Columbia Grammar School	45
	Columbia Institute	2
	Cooper Union	1
	Craigie School	2
	Cutler School	11
	De Lancey School	2
	De La Salle Institute	1
	De Witt Clinton High School	119
	Dwight School	11
	Ethical Culture School	19
	Froebel Normal Institute	1
	Friends' Seminary	1
	Gerrish's (Miss) Collegiate School for Girls	5

New York	Girls' Technical High School	2
	Graham's (Misses) School	2
	Groff School	2
	Hamilton Institute	8
	Hamilton Institute for Girls	2
	Harlem Evening High School	1
	High School of Commerce	6
	Holy Cross Academy	1
	Horace Mann School	67
	Irving School	15
	Joseph Preparatory School	1
	Keller's (Miss) Day School	1
	Kelvin School	7
	Lake School	1
	Loyola School	2
	Madison School for Girls	1
	Morgan's (Mrs. Leslie) School	1
	Morris High School	77
	Nathan Hale School	1
	New York Collegiate Institute	1
	Normal College	8
	Ornstein's (Miss) Classes	2
	Perry's (Dr.) School	1
	Public School 69	1
	Rayson's (Misses) School	3
	Sachs's Collegiate Institute for Boys... ..	14
	Sachs's Collegiate Institute for Girls ..	2
	Senftner Preparatory School	4
	St. Agatha	1
	St. Lawrence Academy	5
	St. Mary's School	4
	Syms School	2
	Trinity School	15
	University Settlement	1
	Veltin's (Miss) School	8
	Wadleigh High School	45
	Woodbridge School	7
	Young Men's Institute	2
Niagara Falls	High School	1
Ossining	Holbrook's (Dr.) School	8
	Mt. Pleasant Military Academy	2
	High School	1
	Ossining School for Girls	1
Peekskill	Peekskill Military Academy	1
	Worrall Hall Military Academy	1
Poughkeepsie	Lyndon Hall	2
	Putnam Hall	11
	Riverview Military Academy	19
Rainbow Lake	Adirondack-Florida School	1
Ripley	High School	1
Rochester	Bradstreet Preparatory School	1

Rochester	East High School	4
	Mechanics Institute	1
Rye	Rye Seminary	2
Saratoga Springs	High School	1
Saugerties	High School	1
Scarsdale	St. David's Hall	1
Schenectady	High School	2
Syracuse	Goodyear-Burlingame School	1
	Jenner's Preparatory School	1
Tarrytown	Castle (The)	3
	Hackley School	1
Troy	Emma Willard School	1
Utica	Balliol School	2
	Utica Free Academy	4
Walden	High School	1
Watertown	High School	1
Weedsport	High School	1
Whitehall	High School	1
Windsor	High School	1
Yonkers	High School	18
New Jersey:		
Asbury Park	High School	5
Bayonne	High School	2
Blairstown	Blair Presbyterial Academy	1
Bloomfield	High School	3
Boonton	High School	1
Bordentown	Bordentown Military Institute	15
Bound Brook	High School	1
Bridgeton	Ivy Hall School	1
Burlington	St. Mary's Hall	1
Convent Station	St. Elizabeth's Academy	1
Cranford	High School	1
East Orange	High School	14
East Rutherford	High School	1
Elizabeth	Battin High School	5
	Pingry School	4
	Vail-Deane School	1
Englewood	Helicon Hall	1
	High School	2
Flemington	High School	1
Freehold	High School	1
Hackensack	High School	3
Haddonfield	High School	1
Hoboken	High School	2
	Hoboken Academy	4
	Stevens School	3
Jersey City	Bergen School for Girls	2
	Hasbrouck Institute	3
Kearny	High School	1
Lakewood	Lakewood School	1

Lawrenceville	Lawrenceville School	14
Livingston	High School	1
Long Branch	Chattle High School	2
Montclair	Cloverside School	1
	High School	18
	Montclair Military Academy	1
Moorestown	Friends' Academy	1
Morristown	Morris Academy	1
	Morristown School	2
Newark	Newark Academy	22
	High School	9
	Newark Seminary	1
New Brunswick	Rutgers Preparatory School	2
Newton	High School	1
Orange	Beard's (Miss) School	2
	Carteret Academy	7
	High School	4
Passaic	High School	1
Paterson	Paterson Collegiate Institute	1
	High School	2
	Hoover's (Miss) School	3
Perth Amboy	High School	1
Phillipsburg	High School	1
Plainfield	Hartridge School	4
	Leal's (Dr.) School for Boys	4
	Stillman High School	12
Princeton	Princeton Preparatory School	1
	Princeton School	10
	Princeton University Tutorial Institute..	1
Red Bank	Shrewsbury Academy	1
Rutherford	High School	3
	Park School	1
Somerville	High School	2
South Orange	Brantwood Hall	1
Summit	High School	1
	Kent Place School	3
Trenton	New Jersey State Model School.....	3
Union	High School	1
Union Hill	High School	2
Wenonah	Wenonah Academy	1
Westfield	High School	1
West Hoboken	High School	1
West Orange	High School	1

Pennsylvania:

Allegheny	Allegheny Preparatory School	1
Bellefonte	Bellefonte Academy	1
Bethlehem	Bethlehem Preparatory School	1
Blairsville	Blairsville College	1
Bradford	High School	1
Bryn Mawr	Baldwin's (Miss) School for Girls....	2

Bryn Mawr	Shipley's (Mrs.) School	1
Butler	High School	1
Chambersburg	Wilson College	1
Chester	Pennsylvania Military College	1
Columbia	High School	1
Germantown	Walnut Lane School	1
Glenshaw	High School	1
Haverford	Haverford School	2
Hazleton	High School	1
Kennett Square	Cedarcroft School	1
Kingston	Wyoming Seminary	5
Lancaster	Stahr's (Miss) School	2
	Yeates School	4
Lebanon	High School	3
Lewisburg	Bucknell University	1
Lititz	Linden Hall	1
Mercersburg	Mercersburg Academy	13
New Castle	High School	1
Overbrook	Sayward's (Miss) School	2
Pennsburg	Perkiomen Seminary	1
Philadelphia	Chestnut Hill Academy	6
	Childs Preparatory Class	2
	De Lancey School	1
	High School for Girls	4
	Hills's (Miss) School	1
	Holman School for Girls	1
	William Penn Charter School	13
	Wissahickon Heights School	3
Pittsburg	Central High School	2
	East End Preparatory School	2
	Gleim's (Miss) School	1
	Shadyside Academy	8
Pottstown	Hill School	62
Pottsville	High School	1
Reading	Girls' High School	1
Saltsburg	Kiskiminetas Springs School	1
Scranton	School of the Lackawanna	1
Sharon	High School	1
Swarthmore	Swarthmore Preparatory School	1
Warren	High School	2
Washington	Trinity Hall	1
	Washington Seminary	1
Wayne	St. Luke's School	29
Westtown	Westtown Boarding School	1
Wilkes-Barre	City High School	1

SOUTH ATLANTIC DIVISION

Delaware:

Wilmington	Friends' School	2
	Hebb's (Misses) School	1

Maryland:

Baltimore	Arundell School	1
	Baltimore City College	1
	Boys' Latin School	1
	Marston's University School	2
	University School for Boys	1
Catonsville	Beaumont School	2
	St. Timothy's School	1
Forest Glen	National Park Seminary	1
Port Deposit	Jacob Tome Institute	7
Reistertown	Hannah More Academy	1

District of Columbia:

Washington	Army and Navy Preparatory School	2
	Central High School	3
	Eastern High School	1
	Emerson Institute	1
	Friends' Select School	11
	Hall-Noyes Preparatory School	1
	Washington School for Boys	3
	Western High School	5

Virginia:

Hampton	Hampton College	1
Newport News	High School	1
	Newport News Academy	1
Orange	Woodberry Forest School	1

North Carolina:

Asheville	Asheville School	7
Charlotte	Presbyterian College	1

Georgia:

Atlanta	Boys' High School	1
	Georgia School of Technology	1
	Peacock School for Boys	1
Savannah	High School	1
	West's (Miss) School	1

SOUTH CENTRAL DIVISION

Kentucky:

London	Sue Bennett Memorial School	1
Louisville	Flexner School	1
	Girls' High School	1
	Manual Training High School	1
	Paterson-Davenport School	2
Maysville	Hayswood Seminary	1

Tennessee:

Memphis	Higbie School	1
	High School	1
	St. Mary's School	11
	Thomas's (Misses) School	2
Murfreesboro	Mooney School	1

Alabama:

Birmingham	Allen's (The Misses) School	1
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Texas:

Dallas	Cowart Hall	2
	High School	1
	St. Mary's Preparatory School	3
El Paso	High School	3
San Antonio	High School	1

Arkansas:

Little Rock	Arkansas Military Academy	2
	High School	9
	Peabody High School	1

NORTH CENTRAL DIVISION

Ohio:

Ada	Ohio Northern University	1
Akron	High School	4
	Oak Place School	3
Blanchester	High School	1
Cincinnati	Butler's (Miss) School	1
	Cincinnati University School	4
	Collegiate School	3
	Educational Institute	1
	Franklin School	3
	Technical School	1
	Terrace Park High School	1
	Walnut Hills High School	1
Circleville	Evert's High School	1
Cleveland	Central High School	2
	East High School	1
	University School	9
	West High School	1
	Western Reserve University	1
Columbus	Central High School	1
Dayton	Steele High School	2
East Cleveland	Shaw High School	1
Norwood	High School	1
Salem	High School	2
Toledo	Smead School	1
	High School	1
Youngstown	Rayen School	9

Indiana:

Indianapolis	Girls' Classical School	1
	Knickerbocker Hall	2
	Shortridge High School	3
Lima	Howe Military School	21
Terre Haute	High School	1

Illinois:

Bloomington	High School	1
Chicago	Armour Institute	1
	Ascham Hall	1
	Chicago Latin School	5
	Francis Parker School	6
	Harvard School	2
	Lake View Institute	1
	Lewis Institute	1
	University High School	5
	University School for Boys	9
	University School for Girls	2
Dixon	High School	1
Evanston	Evanston Classical School	1
Normal	Illinois State Normal University	1
Riverside	High School	1
Wyoming	High School	1

Michigan:

Bay City	High School	1
Detroit	Central High School	2
	Detroit University School	7
Ironwood	High School	1

Wisconsin:

Fond du Lac	Grafton Hall	1
Hudson	High School	1
La Crosse	High School	2
Milwaukee	East Division High School	1
	Milwaukee Academy	10
	Milwaukee-Downer College	1
Stevens Point	State Normal School	1

Minnesota:

Duluth	Central High School	1
	University School	1
Faribault	Shattuck School	8
St. Paul	Backus's (Mrs.) School	4

Iowa:

Burlington	High School	1
Davenport	High School	2
Des Moines	West Des Moines High School	2
Ottumwa	High School	1

Missouri:

Kansas City	Central High School	1
	Prosser Preparatory School	1
Macon	Blees Military Academy	1
Pierce City	High School	1

St. Louis	Central High School	1
	Mary Institute	10
	Smith Academy	3
	Washington University	2
South Dakota:		
Aberdeen	High School	2
	Northern Normal and Industrial School	1
Sioux Falls	All Saints' School	4
Kansas:		
Holton	High School	1
Lawrence	High School	1
WESTERN DIVISION		
Montana:		
Butte	High School	1
Great Falls	High School	1
Lewiston	High School	1
Colorado:		
Denver	East Side High School	2
	Manual Training High School	1
	Wolcott's (Miss) School	1
Utah:		
Ogden	Ogden City High School	1
Salt Lake City	High School	8
Oregon:		
Portland	Allen Preparatory School	1
	Portland Academy	6
	St. Helen's Hall	2
California:		
Los Angeles	Girls' Collegiate School	1
Nordhoff	Thacher School	2
Palo Alto	High School	1
Pasadena	Classical School for Boys	1
	English Classical School for Girls.....	1
	High School	1
	Los Robles School	4
	Throop Polytechnic Institute	1
Redlands	Union High School	1
San Francisco	Bates University School	1
	Lyceum Preparatory School	1
	Polytechnic High School	1
	Raymond Coaching School	1
	University School	1
Santa Barbara	Hicks School	1

INSULAR TERRITORIES AND DEPENDENCIES

Hawaii:

Honolulu	Oahu College	5
	St. Louis College	1

FOREIGN

Germany:

Dresden	Franklin College	2
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Switzerland:

Engelberg	College of Engelberg	1
Geneva	Chateau de Lancy	1

Russia:

Kishineff	Realina Uchilischehe	1
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Roumania:

Bucharest	Gymnasium Comtemio-Voda	1
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India:

Lucknow	Isabella Koburn College	1
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Private Tutors	31
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Self-Preparation	1
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Preparatory Schools not stated	27
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Columbia University Students	41
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Cornell University Students	10
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Harvard University Students	5
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New York University Students	1
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Vassar College Students	1
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The following table classifies the candidates for admission according to the class or type of preparatory school attended:

TABLE IX

	NUMBER OF SCHOOLS	NUMBER OF CANDIDATES
Public high schools	277	1001
Academies and endowed schools	93	406
Private schools	236	905

In this table no account is taken of candidates already admitted to college or of candidates from institutions in regard to which the secretary is without information.

**Work of the
Readers**

As hitherto the work of the readers was done at the offices of the Board in New York.

The number of readers serving in connection with the examinations was this year 98; in 1905 the corre-

sponding number was 83. The names of the readers for the present year are given in the following list:

BOTANY

- Willard Winfield Rowlee.....Professor of Botany, Cornell University
Cornell University, B.L., 1888, and D.Sc., 1893
- Elsie Kupfer, Instructor in Biology, Wadleigh High School, New York,
N. Y.
Columbia University, A.B., 1899, and A.M., 1901

CHEMISTRY

- James Flack Norris.....Professor of Chemistry, Simmons College
The Johns Hopkins University, A.B., 1892, and Ph.D., 1895
- Charles Morse Allen, Instructor in Chemistry, Pratt Institute, Brook-
lyn, N. Y.
Wesleyan University, B.A., 1882, and M.A., 1886
- Victor John Chambers, Tutor in Organic Chemistry, Columbia University
University of Rochester, B.S., 1895; The Johns Hopkins University, Ph.D., 1901
- Charles Henry Ellard, Tutor in Analytical Chemistry, Columbia Uni-
versity
Columbia University, A.B., 1897, and A.M., 1900
- William Fox Roantree, Teacher of Mathematics and Science, Sachs's Col-
legiate Institute, New York, N. Y.
Colgate University, A.B., 1904
- Walter George Whitman, Instructor in Physics and Chemistry, Ethical
Culture School, New York, N. Y.
Tufts College, A.B., 1898

DRAWING

- Thomas Henry Harrington....Tutor in Drawing, Columbia University
Columbia University, C.E., 1889
- Arthur H. Flint, Instructor in Drawing, Commercial High School,
Brooklyn, N. Y.

ENGLISH

- Henry Greenleaf Pearson, Assistant Professor of English, Massachu-
setts Institute of Technology
Harvard University, A.B., 1893
- Nathaniel Waring Barnes, Instructor in English, Ohio Wesleyan Uni-
versity
Columbia University, A.B., 1903, and A.M., 1905
- George Wyllys Benedict, Associate Professor of English, Brown Uni-
versity
University of Vermont, A.B., 1893; Harvard University, A. M., 1897, and
Ph.D., 1899
- Armour Caldwell.....Lecturer in English, Columbia University
Columbia University, A.B., 1902
- Sarah Eleanor Dudley.....Instructor in English, Vassar College
Vassar College, A.B., 1897

Daniel B. Duncan, Teacher of English, Columbia Grammar School, New York, N. Y.

Upper Iowa University, Ph.B., 1890

Charles Galwey, Tutor in the English Language and Literature, College of the City of New York

New York University, A. B., 1901

Jeannette Bliss Gillespy, Instructor in English and History, Dearborn-Morgan School, Orange, N. J.

Columbia University, A.B., 1900

William Echard Golden, Head of the English Department, Polytechnic Preparatory School, Brooklyn, N. Y.

Indiana University, A.B., 1888, and A.M., 1890

Orie Latham Hatcher.....Reader in English, Bryn Mawr College
Vassar College, A.B., 1888; University of Chicago, Ph.D., 1903

Grace Harriet Kupfer, Principal, and Instructor in English, Alcuin Preparatory School, New York, N. Y.

Normal College, A.B., 1892; New York University, A.M., 1900

Clark Sutherland Northup, Assistant Professor of the English Language and Literature, Cornell University

Cornell University, B.A., 1893, and Ph.D., 1898

Emily Wheeler Tyler, Late Teacher of English, Miss Brown's Classical School for Girls, Boston, Mass.

Boston University, Ph.B., 1887, and A.B., 1906

FRENCH

Albert Schinz, Associate Professor of French Literature, Bryn Mawr College

University of Neuchatel, A.B., 1888, and A.M., 1889; University of Tübingen, Ph.D., 1893

Luther Herbert Alexander, Tutor in French, College of the City of New York

Toronto University, A.B., 1883, and A.M., 1885

John Driscoll Fitz-Gerald, Tutor in the Romance Languages and Literatures, Columbia University

Columbia University, A.B., 1895, and Ph.D., 1906

Harry Egerton Ford, Professor of Romance Languages, Washington and Jefferson College

Toronto University, A.B., 1895, and A.M., 1899

John Glanville Gill, Instructor in Romance Languages, Harvard University

Ottawa University, A.B., 1896; Harvard University, A.M., 1905, and Ph.D., 1906

Pierre J. Marique.....Tutor in French, College of the City of New York
Virginia Newcomb, Teacher of French and German, Short Hills School,

Short Hills, N. J.

Columbia University, A.B., 1900, and A.M., 1902

Cornelia Hephzibah Bulkley Rogers, Associate Professor of Romance Languages, Vassar College

Wellesley College, A.B., 1884; Yale University, Ph.D., 1894

Louis Alexandre Roux, Master of French and Latin, Newark Academy, Newark, N. J.

Brown University, A.B., 1894

GEOGRAPHY

Amadeus William Grabau, Professor of Palæontology, Columbia University

Massachusetts Institute of Technology, S.B., 1896; Harvard University, S.M., 1898, and S.D., 1900

William Wallace Clendenin, Teacher of Physiography, Wadleigh High School, New York, N. Y.

Missouri State University, B.Sc., 1886, and M.Sc., 1889; Harvard University, A.M., 1891

GERMAN

Frank Vogel, Professor of Modern Languages, Massachusetts Institute of Technology

Harvard University, A.B., 1887, and A.M., 1892

Anna Erdmann, Teacher of German, Packer Collegiate Institute, Brooklyn, N. Y.

Emilie A. Flintermann, . . . Instructor in German, Mount Holyoke College University of Michigan, Ph.B., 1898

Frederick William Justus Heuser, Tutor in the Germanic Languages and Literatures, Columbia University

Columbia University, A.B., 1901, and A.M., 1902

Emil Alexander Charles Keppler, Tutor in German, College of the City of New York

Columbia University, Ph.B., 1895, and A.M., 1897

Frederick William Charles Lieder, Instructor in German, Harvard University

Cornell University, B.A., 1902, and M.A., 1903

August Prehn, Teacher of German, Columbia Grammar School, New York, N. Y.

University of Münster, Ph.D., 1883

Arthur Frank Joseph Remy, Instructor in the Germanic Languages and Literatures, Columbia University

College of the City of New York, A.B., 1890; Columbia University, A.M., 1897, and Ph.D., 1901

Mélanie Constanze Richardt, Teacher of German, Collegiate School, New York, N. Y.

Rudolf Tombo, Instructor in German, Alcuin Preparatory School, New York, N. Y.

University of Rostock, Ph.D., 1870

GREEK

Charles Knapp, . . . Professor of Classical Philology, Columbia University Columbia University, A.B., 1887, A.M., 1888, and Ph.D., 1890

Roscoe Guernsey, . . . Tutor in Greek, Columbia University Union College, A.B., 1896; The Johns Hopkins University, Ph.D., 1901

Grace Harriet Macurdy, . . . Associate Professor of Greek, Vassar College Radcliffe College, A.B., 1888; Columbia University, Ph.D., 1903

Oliver Samuel Tonks, Preceptor in Art and Archæology, Princeton University

Harvard University, A.B., 1898, A.M., 1899, and Ph.D., 1903

Alice Van Vliet, Director of Latin and Greek, Packer Collegiate Institute, Brooklyn, N. Y.
University of Chicago, A.B., 1896

HISTORY

Arthur Charles Howland, Assistant Professor of Mediæval History, University of Pennsylvania
Cornell University, B.A., 1893; University of Pennsylvania, Ph.D., 1897

Elizabeth Briggs, Teacher of History, Dr. Sachs's School for Girls, New York, N. Y.
Graduate of Harvard Annex, 1887; Cornell University, M.A., 1891

Louis Ogden Condit, Teacher of History, Riverview Military Academy, Poughkeepsie, N. Y.
New York University, A.B., 1903

Howard Levi Gray.....Teaching Fellow in History at Harvard University
Harvard University, A.B., 1898, and A.M., 1900

Sarah Louise Hadley, Teacher of History, Berkeley School, Cambridge, Mass.
Wellesley College, A.B., 1896; Columbia University, A.M., 1903

Albert Edward McKinley, Professor of History, Temple College, Philadelphia, Pa.
University of Chicago, Ph.B., 1896; University of Pennsylvania, Ph.D., 1900

Frederic Austin Ogg..Teaching Fellow in History, Harvard University
De Pauw University, Ph.B., 1899; University of Indiana, A.M., 1900; Harvard University, A.M., 1904

LATIN

Nelson Glenn McCrea.....Professor of Latin, Columbia University
Columbia University, A. B., 1885, A.M., 1886, and Ph.D., 1888

Victor Dow Borst, Instructor in Latin, Hasbrouck Institute, Jersey City, N. J.
Cornell University, B.A., 1901

Anne Browning Butler, Teacher of Greek and Latin, Tudor Hall, Indianapolis, Ind.
Cornell University, B.A., 1902

Mario Emilio Cosenza, Tutor in the Latin Language and Literature, College of the City of New York
College of the City of New York, A.B., 1901; Columbia University, Ph.D., 1906

Charles Joseph Deghuée, Professor of Latin, Trinity School, New York, N. Y.
Columbia University, A.B., 1884, A.M., 1885, and L.H.D., 1886

John Francis Greene, Assistant Professor of Roman Literature and History, Brown University
Brown University, A.B., 1891, and A.M., 1901

Elizabeth Hazelton Haight.....Instructor in Latin, Vassar College
Vassar College, A.B., 1894, and A.M., 1899

Lillie Maria Lawrence..Assistant in Classical Philology, Barnard College
Columbia University, B.S., 1905

- Dwight Ralston Little, Instructor in Latin, Polytechnic Preparatory School, Brooklyn, N. Y.
Williams College, A.B., 1900; New York University, A.M., 1903, and Pd.M., 1904
- Grace Harriet Macurdy.... Associate Professor of Greek, Vassar College
Radcliffe College, A.B., 1888; Columbia University, Ph.D., 1903
- Katharine Campbell Reiley, Teacher of Latin and Greek, Veltin School, New York, N. Y.
Vassar College, A.B., 1895; Columbia University, A.M., 1902
- Ida Carleton Thallon..... Instructor in Latin, Vassar College
Vassar College, A.B., 1897, and A.M., 1901; Columbia University, Ph.D., 1905
- Elizabeth McJimsey Tyng, Teacher of Latin, Packer Collegiate Institute, Brooklyn, N. Y.
Cornell University, B.A., 1903; Columbia University, A.M., 1904
- John William Henry Walden... Instructor in Latin, Harvard University
Harvard University, A.B., 1888, A.M., 1889, and Ph.D., 1891
- John Calvin Watson..... Instructor in Latin, Cornell University
Harvard University, A.B., 1894, A.M., 1900, and Ph.D., 1902

MATHEMATICS

- Robert Woodworth Prentiss, Professor of Mathematics and Astronomy, Rutgers College
Rutgers College, B.Sc., 1878, and M.Sc., 1881
- Eleanor Robinson Baker, Teacher of Mathematics, St. Mary's School, New York, N. Y.
Vassar College, A.B., 1899
- Charles Earle Bickl , Adjunct Professor of Mathematics, Teachers College, Columbia University
Dickinson College, A.B., 1886, and A.M., 1889
- William Charles Brenke, Teaching Fellow in Mathematics, Harvard University
University of Illinois, B.S., 1896 and 1897, and M.S., 1899
- William Henry Bussey..... Tutor in Mathematics, Columbia University
Northwestern University, A.B., 1900; Harvard University, A.B., 1901, and A.M., 1902; Chicago University, Ph.D., 1904
- Randolph Foster Clark, Instructor in Mathematics, Collegiate School, New York, N. Y.
Williams College, A.B., 1900; State Normal College, Albany, Pd.B., 1902
- Elizabeth Buchanan Cowley.. Instructor in Mathematics, Vassar College
Vassar College, A.B., 1901, and A.M., 1902
- John R. Gardner, Teacher of Mathematics, Irving School, New York, N. Y.
Upper Iowa University, B.S., 1890; State University of Iowa, C.E., 1894; Upper Iowa University, M.S., 1900
- Ernest Herman Koch, Jr., Instructor in Mathematics, Pratt Institute, Brooklyn, N. Y.
University of Pennsylvania, B.S., 1897

Leslie Leland Locke, Instructor in Mathematics, Adelphi College, Brooklyn, N. Y.

Grove City College, A.B., 1896, and A.M., 1900

Wilfrid Ewart MacDonald, Instructor in Mathematics, Massachusetts Institute of Technology

University of Tennessee, A.B., 1901

Clarence Lemuel Elisha Moore, Instructor in Mathematics, Massachusetts Institute of Technology

Ohio State University, B.Sc., 1901; Cornell University, M.A., 1902, and Ph.D., 1904

Carl Eben Stromquist, Instructor in Mathematics, Princeton University
Bethany College, B.S., 1899; Yale University, Ph.D., 1903

Virgil Snyder, . . . Assistant Professor of Mathematics, Cornell University
Iowa State College, B.S., 1889; University of Göttingen, Ph.D., 1894

Camille A. Toussaint, . . . Assistant in Mathematics, Columbia University
Columbia University, A.B., 1903, and A.M., 1904

Mary Esther Trueblood, Instructor in Mathematics, Mount Holyoke College

Earlham College, Ph.B., 1893; University of Michigan, Ph.M., 1896

Roxana Hayward Vivian, Instructor in Pure Mathematics, Wellesley College

Wellesley College, A.B., 1894; University of Pennsylvania, Ph.D., 1901

Harrison Emmett Webb, Teacher of Mathematics, Stevens School, Hoboken, N. J.

University of Rochester, A.B., 1898

PHYSICS

Arthur Willis Goodspeed, Professor of Physics, University of Pennsylvania

Harvard University, A.B., 1884; University of Pennsylvania, Ph.D., 1889

Robert Arthur Bright, Instructor in Physics and Chemistry, Columbia Grammar School, New York, N. Y.

Yale University, Ph.B., 1896

Joseph Moore Jameson, Instructor in Physics, Pratt Institute, Brooklyn, N. Y.

Cornell University, Ph.B., 1893

Sidney Aylmer-Small, Teacher of Physics, Trinity School, New York, N. Y.

Columbia University, E.E., 1899

Frank Leo Tufts, Adjunct Professor of Physics, Columbia University
Antioch College, B.S., 1891; Harvard University, A.B., 1894; Columbia University, A.M., 1896, and Ph.D., 1897

SPANISH

Cornelia Hephzibah Bulkley Rogers, Associate Professor of Romance Languages, Vassar College

Wellesley College, A.B., 1884; Yale University, Ph.D., 1894

Luther Herbert Alexander, Tutor in French, College of the City of New York

Toronto University, A.B., 1883, and A.M., 1885

The work of the readers began at half-past nine a. m. on Tuesday, June 19. It was completed by the afternoon of Monday, July 2, thus occupying a period of exactly two weeks. The maximum time during which any single group of readers were occupied, however, amounted to only ten days.

It may be of interest to mention that the cost per candidate of reading and rating the answer-books was slightly less than last year, being \$1.70 as against \$1.79 in 1905.

The average number of books rated per hour by the readers was 8.1 as against 8.7 last year.

The following table gives statistics in regard to the number of answer-books read in each subject:

TABLE X

SUBJECT	NUMBER OF ANSWER-BOOKS RECEIVED	NUMBER OF ANSWER-BOOKS READ A SECOND TIME	TOTAL	NUMBER OF HOURS SPENT IN READING	AVERAGE NUMBER OF ANSWER-BOOKS READ PER HOUR
Botany	11	11	22	25	1.5
Laboratory books	8	8	16		
Chemistry	298	75	373	155	4.7
Laboratory books	281	75	356		
Drawing	202	98	300	25	12.
English	2521	1027	3548	477¾	7.4
French	1295	555	1850	283½	6.5
Geography	20	20	40	30	2.4
Laboratory books	16	16	32		
German	1260	494	1754	335	5.2
Greek	1083	501	1584	162½	9.7
History	1370	722	2092	363½	5.8
Latin	5693	2852	8545	667½	12.8
Mathematics	3327	1370	4697	618½	7.6
Physics	438	266	704	125	10.6
Laboratory books	395	229	624		
Spanish	19	8	27	10	2.7
	18,237	8327	26,564	3278¼	8.1

Results of the Examinations

The following table shows the number of candidates for each examination subject and the measure of success attained by them.

TABLE XI

	<i>Number of Candidates</i>	<i>Ratings 90-100 %</i>	<i>Ratings 75-89 %</i>	<i>Ratings 60-74 %</i>	<i>Ratings 50-59 %</i>	<i>Ratings 40-49 %</i>	<i>Ratings 30-39 %</i>	<i>Ratings 20-29 %</i>	<i>Ratings 10-19 %</i>	<i>Ratings 0-9 %</i>
English										
<i>a.</i> Reading.....	1380	2.9	17.0	39.9	21.0	13.2	6.1	59.8	80.8	93.9
<i>b.</i> Study.....	1141	1.0	15.7	42.0	15.2	13.1	13.1	58.6	73.8	86.9
	2521	2.0	16.4	40.9	18.4	13.1	9.3	59.3	77.6	90.7
History										
<i>a.</i> Ancient.....	403	0.5	8.2	31.1	21.8	13.2	25.3	39.7	61.5	74.7
<i>b.</i> Mediæval and Modern	50	0.0	4.0	30.0	18.0	16.0	32.0	34.0	52.0	68.0
<i>c.</i> English.....	437	1.4	8.9	31.6	14.6	14.2	29.3	41.9	56.5	70.7
<i>d.</i> American.....	480	4.8	20.2	35.0	15.8	10.8	13.3	60.0	75.8	86.7
	1370	2.3	12.5	32.6	17.3	12.8	22.6	47.3	64.6	77.4
Latin										
<i>a.</i> i. Grammar.....	1004	6.4	21.3	29.6	12.5	13.8	16.4	57.3	69.7	83.6
ii. Elementary Prose Composition.....	994	2.0	10.0	24.7	7.6	10.6	45.1	36.7	44.4	54.9
<i>b.</i> Caesar.....	670	2.1	19.7	39.6	11.3	11.6	15.7	61.3	72.7	84.3
<i>c.</i> Cicero.....	859	2.8	18.0	31.4	10.2	14.0	23.5	52.3	62.5	76.5
<i>d.</i> Virgil.....	533	2.8	22.5	34.1	9.4	13.1	18.0	59.5	68.9	82.0
<i>e.</i> Nepos.....	30	0.0	26.7	13.3	6.7	20.0	33.3	40.0	46.7	66.7
<i>f.</i> Sallust.....	24	0.0	4.2	4.2	16.7	29.2	45.8	8.3	25.0	54.2
<i>g.</i> Ovid.....	25	0.0	4.0	16.0	8.0	16.0	56.0	20.0	28.0	44.0
<i>l.</i> Prose Composition...	641	1.1	8.7	21.7	9.5	15.4	43.5	31.5	41.0	56.5
<i>m.</i> Elementary Sight Translation of Prose	742	6.5	25.1	26.6	8.6	12.4	20.9	58.1	66.7	79.1
<i>p.</i> Advanced Sight Translation of Prose	56	5.4	3.6	26.8	7.1	14.3	42.9	35.7	42.9	57.1
<i>q.</i> Sight Translation of Poetry.....	16	0.0	18.8	25.0	18.8	6.3	31.3	43.8	62.5	68.8
<i>dq.</i> Virgil and Sight Translation of Poetry	100	0.0	18.0	28.0	14.0	22.0	18.0	46.0	60.0	82.0
	5603	3.4	17.5	29.0	10.0	13.2	26.9	40.9	50.9	73.1
Greek										
<i>a.</i> i. Grammar.....	219	7.8	30.6	33.8	9.1	8.2	10.5	72.1	81.3	89.5
ii. Composition.....	215	2.8	19.1	27.4	7.0	9.8	34.0	49.3	56.3	66.0
<i>b.</i> Xenophon.....	188	2.1	19.7	38.3	11.2	15.4	13.3	60.1	71.3	86.7
<i>c.</i> Iliad I-III.....	67	1.5	28.4	43.3	6.0	7.5	13.4	73.2	79.1	86.6
<i>f.</i> Prose Composition...	158	3.8	15.2	17.1	12.0	9.5	42.4	36.1	48.1	57.6
<i>g.</i> Sight Translation of Prose.....	158	1.9	15.2	20.9	8.9	15.2	38.0	38.0	46.8	62.0
<i>h.</i> Homer at Sight...	6	0.0	0.0	33.3	0.0	16.7	50.0	33.3	33.3	50.0
<i>ch.</i> Iliad I-III, and Sight	72	0.0	19.4	31.9	13.9	12.5	22.2	51.4	65.3	77.8
	1083	3.4	20.9	29.5	9.5	11.3	25.5	53.7	63.3	74.5
French										
<i>a.</i> Elementary ..	854	2.9	21.8	41.0	13.3	9.6	11.4	65.7	79.0	88.6
<i>b.</i> Intermediate..	388	0.5	3.9	39.7	21.9	15.2	18.8	44.1	66.0	81.2
<i>bc.</i> Intermediate and Advanced.....	53	1.9	3.8	9.4	26.4	15.1	43.4	15.1	41.5	56.6
	1295	2.2	15.7	39.3	16.4	11.5	14.9	57.1	73.6	85.1
German										
<i>a.</i> Elementary ..	853	3.4	27.4	33.8	13.2	9.1	13.0	64.6	77.8	87.0
<i>b.</i> Intermediate..	348	1.7	15.2	37.6	17.2	14.4	13.8	54.6	71.8	86.2
<i>bc.</i> Intermediate and Advanced.....	59	1.7	10.2	30.5	10.2	15.3	32.2	42.5	52.5	67.8
	1260	2.9	23.3	34.7	14.2	10.9	14.1	60.8	75.0	85.9
Spanish	19	5.3	26.3	26.3	21.1	15.8	5.3	57.9	78.9	94.7

TABLE XI (Continued)

	<i>Number of Candidates</i>	<i>Percentages of Ratings 90-100</i>	<i>Percentages of Ratings 75-89</i>	<i>Percentages of Ratings 60-74</i>	<i>Percentages of Ratings 50-59</i>	<i>Percentages of Ratings 40-49</i>	<i>Percentages of Ratings 30-39</i>	<i>Percentages of Ratings 20-29</i>	<i>Percentages of Ratings 10-19</i>	<i>Percentages of Ratings 0-9</i>
Mathematics										
<i>a. Elementary Algebra</i>	1180	17.7	31.1	26.2	9.2	7.2	8.6	75.0	84.2	91.4
<i>i. To Quadratics...</i>	235	13.2	19.6	26.4	11.9	11.0	17.0	59.1	71.1	83.0
<i>ii. Quadratics, etc...</i>	99	2.0	25.3	26.3	18.2	15.2	13.1	53.5	71.7	86.9
<i>b. Advanced Algebra...</i>	86	1.2	9.3	16.3	23.3	12.8	37.2	26.7	50.0	62.8
<i>c. Plane Geometry.....</i>	1069	17.4	21.5	22.0	10.1	10.4	17.7	61.8	71.9	82.3
<i>d. Solid Geometry.....</i>	133	6.0	21.8	34.6	12.8	9.0	15.8	62.4	75.2	84.2
<i>cd. Plane and Solid Geometry.....</i>	224	11.2	22.8	28.6	14.3	10.3	12.9	62.5	76.8	87.1
<i>e. Trigonometry.....</i>	184	1.1	16.8	35.3	16.3	14.7	15.8	53.3	69.6	84.2
<i>f. Plane Trigonometry..</i>	108	1.9	6.5	27.8	14.8	16.7	32.4	36.1	50.9	67.6
<i>g. Spherical Trigonome- try.....</i>	9	11.1	0.0	33.3	22.2	22.2	11.1	44.4	66.7	88.9
	3327	14.0	23.9	26.0	11.4	10.0	14.8	63.9	75.3	85.2
Physics.....	392	1.5	14.8	34.2	13.3	19.4	16.8	50.5	63.8	83.2
Chemistry..	281	3.9	31.7	37.7	8.9	10.0	7.8	73.3	82.2	92.2
Botany.....	8	0.0	12.5	12.5	0.0	12.5	62.5	25.0	25.0	37.5
Geography.....	16	0.0	25.0	62.5	6.3	6.3	0.0	87.5	93.8	100.0
Drawing.....	202	3.0	7.4	41.1	14.0	11.4	22.3	51.5	66.3	77.7
Total.....	17467	5.0	18.7	32.0	13.0	12.2	19.2	55.7	68.7	80.9

Candidates succeeded in obtaining a rating of 100 in very few examination subjects. A rating of 100 per cent. was obtained in Latin grammar by three candidates; in elementary Latin prose composition by one candidate; in elementary algebra complete by twenty candidates; in algebra to quadratics by twelve candidates; in plane geometry by thirty-three candidates; in solid geometry by two candidates; in plane and solid geometry by two candidates; in physics by one candidate, and in drawing by two candidates.

The following table shows the highest rating obtained in each subject together with the total number of candidates offering the subject:

TABLE XII

SUBJECT	NUMBER OF CANDIDATES	HIGHEST RATING	SUBJECT	NUMBER OF CANDIDATES	HIGHEST RATING
English a	1380	97	French a	854	97
b	1141	98	b	388	92
History a	403	94	bc	53	90
b	50	75	German a	853	98
c	437	96	b	348	96
d	480	97	bc	59	92

TABLE XII (Continued)

SUBJECT	NUMBER OF CANDIDATES	HIGHEST RATING	SUBJECT	NUMBER OF CANDIDATES	HIGHEST RATING
Latin a i	1004	100	Spanish	19	93
a ii	994	100	Mathematics a i	235	100
b	670	97	a ii	99	95
c	859	96	a i & ii	1180	100
d	533	96	b	86	90
e	30	80	c	1069	100
f	24	79	d	133	100
g	25	75	cd	224	100
i	641	95	e	184	90
m	742	95	f	108	92
p	56	90	g	9	90
q	16	82	Physics	392	100
dq	100	87	Chemistry	281	95
Greek a i	219	97	Botany	8	82
a ii	215	93	Geography	16	83
b	188	93	Drawing	202	100
c	67	90			
f	158	95			
g	158	95			
h	6	65			
ch	72	87			

The average number of ratings per candidate this year was 7.2 as against 7.8 last year, 8.4 in 1904, and 8.8 in 1903.

The following table institutes a comparison between the results of the six years during which the Board has been in existence:

TABLE XIII

RATINGS	1901 PER CENT	1902 PER CENT	1903 PER CENT	1904 PER CENT	1905 PER CENT	1906 PER CENT
90-100	7.1	6.7	6.3	6.1	4.5	5.0
75-89	20.2	17.8	20.0	21.4	20.3	18.7
60-74	32.0	31.4	31.9	32.6	31.4	32.0
50-59	11.2	12.4	11.8	12.1	12.4	13.0
40-49	11.7	12.4	11.1	11.1	12.2	12.2
0-39	17.8	19.4	18.9	16.7	19.1	19.2
60-100	59.3	55.9	58.2	60.1	56.2	55.7
50-100	70.5	68.3	70.0	72.2	68.6	68.7
40-100	82.2	80.6	81.1	83.3	80.8	80.9

Financial

The following financial statement covers the operations of the Board during the twelve months ending August 31, 1906:

TABLE XIV

RECEIPTS

Balance on hand September 1, 1905	\$ 3,777.44
1. Sales of volumes of examination questions.....	418.66
2. Sales of printed documents	37.50
3. Sales of duplicate certificates	210.00
4. Examination fees	13,081.00
	\$17,524.60

EXPENDITURES

A. Office of the Secretary:	
1. Salaries	\$ 2,515.00
2. Printing	884.75
3. Stationery and incidentals	141.43
4. Postage and expressage	576.19
5. Clerical and other assistance	978.85
6. Furniture and fixtures	188.26
	\$ 5,284.48
B. Conduct of examinations:	
1. Examiners	
Salaries	\$ 955.00
Expenses	243.32
	\$1,198.32
2. Readers	
Salaries	\$3,283.75
Expenses	860.11
	\$4,143.86
3. Supervisors and proctors	
Expenses	829.50
4. Examination Supplies	
Question papers, answer-books, logarithmic tables, maps, envelopes, etc	1,228.83
5. Postage and expressage	296.61
	\$ 7,697.12
Total expenses	\$12,981.60
Balance on hand	4,543.00
	\$17,524.60

The expenditures of the Board during the twelve months ending August 31, 1906, show an increase over the expenditures of the previous fiscal year amounting to \$1,626.74. The corresponding increase in the number of candidates examined amounts to 355. It follows therefore that under existing conditions each new candidate costs the Board \$4.58, which is in tolerably close conformity with the estimate made in the last Annual Report.

Respectfully submitted,

THOMAS S. FISKE, *Secretary*

September 1, 1906

IV

REVIEWS

The German universities and university study—By FRIEDRICH PAULSEN, Professor of Philosophy in the University of Berlin—Authorized translation by Frank Thilly, Professor of Psychology in Princeton University, and William W. Elwang. New York: Charles Scribner's Sons, 1906. 451 p. \$3.00.

A volume might be written in praise of this admirable book. A second volume might be written on the thoughts concerning American higher education which it suggests. It will at once be accepted as the authoritative book on its subject. Fortunately the translation effectively preserves some of the best qualities of Paulsen's very readable style.

No topic in any way connected with German university organization, administration, and work, fails of mention and careful treatment. The historical material is illuminating and suggestive, and the concrete illustrations of various tendencies and practices are numerous and helpful.

We are more disposed to comment briefly upon some of the suggestions for our American universities that are contained in Paulsen's pages than to dwell in detail upon specific excellences of the book itself. How many Americans know what a university is, or appreciate its relation to the nation's life? Why is it that Chicago, Columbia, Harvard, and Johns Hopkins (naming them in alphabetical order) are by European observers put in a class by themselves, and judged and considered apart from all other American institutions of the higher learning? It cannot be because of their age, for Chicago and Johns Hopkins are young; it cannot be on account of their size, for Johns Hopkins is small. Is it lack of humor, is it stupidity, or is it sheer vanity, that dots the United States over with "universities," a few score of which might make respectable colleges and the rest more or less indifferent secondary schools?

The truthful and adequate answers to these questions would throw a flood of light upon our national intellectual standards and insight. They would go far to put an end to the farce of four "universities" in the city of New Orleans, five in the city of Nashville, and eleven in the State of Ohio. If every trustee and every professor of every American "university" would read Paulsen's book thoughtfully, he could hardly be restrained from organizing a movement to change the name of his institution. Even the Association of American Universities might, in that case, have to part with some of its members.

The chief lesson of Paulsen's book is the true significance of the university as an institution of civilized man, the jealousy with which the name should be guarded from debasement and improper use, and the zeal with which the university ideal should be followed, lead where it may. German public opinion knows what the word university means; American public opinion does not. In consequence, the university has a definite and responsible status in Germany, while in America it is still engaged in defining itself to itself. Being a younger people than the Germans and having had difficult and peculiar problems of our own to solve, we Americans cannot fairly be criticised for not having as yet developed universities in all respects equal to theirs. We are open to the sharpest criticism, however, for deliberately degrading and misapplying a great name, and thereby making ourselves a laughing-stock.

Writers and speakers who are not accurately informed are in the habit of contrasting unfavorably the position and influence of the American university professor with that of his German contemporary. If the comparison is confined to those American institutions that are real, and not merely nominal universities, the American professor will not fare badly in the contrast. In regard to the appointment to professorships, for example, Paulsen has some very instructive comments on the German practice (pp. 83-86), and it is easy to draw the lesson for America by substituting "trustees and president" for "the government."

Paulsen is in the highest degree fair and discriminating in his treatment of the problems incident to combining research

with instruction. He sees the temptation to pseudo-productivity and to lead students to specialize too early. Nevertheless, he holds fast to the incontestable fact that only by combining research with instruction can a university exist at all.

In concluding his historical retrospect of the development of the German university (pp. 66-67), Paulsen drops a most interesting hint as to the possible significance of the undercurrent of hostility to the scientific activity of the universities which is just now perceptible. Science has not been able to redeem its promise to supply a complete and certain theory of the universe, in place of those which theology and philosophy formerly offered. Disappointment has resulted, for it is more and more evident that science cannot give a comprehensive world view that will satisfy both feeling and imagination. "It only discovers thousands of fragmentary facts, some of them tolerably certain, especially in the natural sciences, which at least supply a basis for practice; some of them forever doubtful, forever capable of revision, as in the historical sciences. . . . Science does not satisfy the hunger for knowledge, nor does it supply the demand for personal culture. It demands the investment of one's full strength and offers but scant rewards. . . . Is it [this disappointment], as a few think, the premonitory symptom of the bankruptcy of science, its abdication in favor of faith? Or is it rather a natural demand for ideas, the long-suppressed demand for philosophy that is coming to life again, but is not yet quite sure of its path and goal?"

This is not the least noteworthy passage in a noteworthy book.

A first view of English literature—By WILLIAM VAUGHN MOODY and ROBERT MORSS LOVETT. Illustrated. New York: Charles Scribner's Sons, 1905. vi + 386 p. \$1.00.

This book has the merits and the defects of the same authors' more advanced *History of English literature*, on which it is founded. It is a series of brilliant monographs on the leading poets and prose writers of Great Britain; but most writers of the second and third rank are eliminated from the discus-

sion. The authors disarm criticism by admitting this, in their preface; it therefore remains for the teacher to decide whether or not that is the kind of text-book he wants. Certainly the work has the merit of making the study of literature seem a very easy and attractive thing; by no stretching of terms, however, can the *View* be called thoro. Moreover, as in the *History*, the suggestiveness of the writing is expected to atone for lack of definite statement, dates, etc. This is stimulating in the extreme, but, it is to be feared, to the scholar of mature years, rather than to the high-school student, who may lose himself in the realm of vagueness so delightful to a certain type of mind. Yet this sort of guide, it may be said again, will be of assistance to the teacher who knows and can impart the knowledge of detail here somewhat lacking; others, perhaps, will miss the firm footing supplied by other text-books less thoughtful and less literary in point of view.

The plan of the book is neat and, within its limits, commendable. The discussion of periods is prefaced by a history of England during the time under consideration, tendencies in life and thought are clearly defined, foreign influences are pointed out, and the student can see exactly what were the circumstances shaping the lives and characters of the great authors he is to deal with. Furthermore—and this is the real value of the book—masterpieces of literature are analyzed and criticised at great length and with real charm and discrimination. Tabular views follow the main discussion of the separate chapters, and in these some men that other critics have thought important—Elizabethan dramatists like Webster and Heywood, and nineteenth century writers like Hazlitt, Landor, the Rossettis, Pater, etc.—are allowed to raise their diminished heads among their more fortunate fellows discussed in the main body of the work. The book is attractively printed and is illustrated by twenty-five portraits.

G. C. D. ODELL.

V

NOTES AND NEWS

The Schools' and the Unemployed

In a recent letter to the London *Times* the Warden of New College, Oxford, raised the question as to a possible relationship of cause and effect between the shortcomings of the elementary school systems and the unemployed. A few days later Dr. T. J. Macnamara, the well-known educationist and member of Parliament, took up the subject and offered some comments and suggestions that are as pertinent in America as in England. Dr. Macnamara wrote:

Year by year, I suppose, not less than two hundred thousand boys leave the elementary schools. . . . They are between the ages of twelve and fifteen, and have reached from the fifth to the seventh standards. They have received a thoro, if rudimentary, general education, upon which with the greatest ease skilled handicraftsmanship could be superimposed if taken in hand at once. In the great bulk of cases, however, the exigencies of the little home circle of which they are members demand that they shall go to "a little place of work" as wage-earners at once. They therefore become van boys, errand boys, messengers, and so on, at from 6s. to 8s. a week. In this capacity they learn no handicraft whatever. After two or three years the wage the little place provides begins to be considered too small. They want more, fail to get it, are replaced by other small boys, and seek more remunerative employment elsewhere. Being wholly unskilled, they find the task of securing further employment very difficult, lounge about for a year or two as unemployed, and by-and-by in very many cases—as a result, of course, of environment—drift into the steadily growing ranks of the unemployable. Thus, under twenty years of age, you have at any one time a steadily-recruited army of a million and a half young fellows—the figures are well inside the mark—whom our present system has thrust deliberately into the hopeless army of the unemployed and unemployable. In the textile areas the problem is less acute; in London and other great centres, where there is no great all-embracing industry compelling a certain amount of technical skill, the matter is of the gravest social importance. It represents, in my opinion, with other social shortcomings of course, the most pregnant cause of unemployment in this country at this time.

Dr. Macnamara is right, and the conditions that he so clearly states and analyzes exist in full force on this side of the Atlantic. Their results would be speedily and strongly felt in a period of financial and commercial stringency and depression.

The one remedy is the establishment of trade and technical continuation schools, and our city and town school boards should set about the solution of this problem before it grows harder. Doubtless some help will be found in the forthcoming report of Dr. Macnamara's own commission of inquiry, concerning which he writes:

The question is, What is to be done? Early in the present year the Plumbers' Company organized a representative gathering at the Guildhall over which Viscount Selby presided. Great employers of labor, trade union representatives, and educationists were present; and a resolution, which I had the honor to submit to the conference, was adopted expressing the view that a real endeavor should be set on foot to spread again amongst the operative classes the knowledge of handicraft and to revive under modern conditions what I may call a national system of apprenticeship. Since that time a committee appointed by the conference has met from time to time in the House of Commons. Amongst its members are Sir Henry Hibbert, Sir Horace Plunkett, Mr. Priestley, M. P.; Mr. Jowett, M. P.; Sir Henry Craik, M. P.; myself as chairman, and Mr. Coles, of the Plumbers' Company, as secretary. We have prepared a report for submission to the Guildhall Conference—which I hope will be reconvened just before Parliament meets—containing a number of practical suggestions designed, as I say, to encourage the spread of handicraft and widely extend the facilities for technical training. And a most interesting feature of our deliberations has been the fact that thruout we have had the most valuable support from the labor leaders amongst our members.

**The Limitations of
Scientific Imagination**

Apart from its intrinsic interest the discussion concerning radium, which arose at the meeting of the British Association and which has been continued during the past week in *The Times*, serves the useful purpose of settling a much older controversy. For it can no longer be held that the study of natural philosophy fails as a means of developing the imaginative faculties. Indeed, among all the themes presented by the "humanities" it would be difficult to find a conception as extravagant and as curiously supported as is the theory that the thermal energy of the earth is to be attributed to a substance so fugitive that its properties in the bulk have never been observed, and so rare that it is secured only in milligrams. With the increase of facilities such as are offered by the British Association and by kindred bodies for publishing to the world the results of scientific research, it is to be expected that occasionally the opportunity will be

taken to give utterance to immature expressions of opinion regarding what is merely possible. This can only be checked by limiting the writers of papers in a greater measure than is now done to statements of experimental results. The discussion is a timely illustration of the danger of departing from those principles of research whose establishment gave the impetus to the investigators of the latter half of the 19th century, and which at the instance of Lyell brought geology itself into line with engineering and the allied sciences. While admitting that active theorizing is essential as a directive element in physical research, the aim must be to balance the imagined against the observed phenomena, allowing experiment so far as possible to speak to the world for itself.

Lord Kelvin, in a letter to *The Times* of Monday, leads the matter out of the region of conjecture back into the laboratory by calling attention first to the observed *slowness* with which helium is extracted from radium. He also reminds the controversialists that after a certain amount of helium has been removed from a sample of radium a further supply can, after an interval, be extracted; and that some helium remains in the modified sample of radium. Lord Kelvin considers that this is thoroly in accordance with Rutherford's suggestion that "uranium, thorium, and radium are in reality compounds of helium"; and more particularly "that radium (atomic weight 225) may be a compound of four atoms of helium (atomic weight 4×5), and one atom of lead (atomic weight 205)." Having indicated the significance of this evidence, he proceeds to cite the estimate, by Rutherford, that the duration of radium as a source of energy is not more than a few thousand years; and he concludes that the assumption that uranium, thorium, actinium, "and other matters capable of being 'transformed slowly into radium' constitute a sufficient store of energy for sun-heat and underground heat," is not validly supported by any experimental evidence hitherto published. A further aspect of the question is manifested by comparing the experimental results described in the discussion by Sir William Crookes with those of Sir William Ramsay, as reported in *The Times* of August 8. Nobody can doubt the respective powers of these two experimentalists; and yet, proceeding along different lines towards the study of the effect of restricting the emission space in the case of radium, they arrive at diametrically opposite conclusions. While a doubt exists as to why the effect of locking up radium in a box should differ from the effect of enclosing it in the bulb of a thermometer, it appears to be vain to take up the time of the British Association with speculations as to what part it plays in the thermal history of the earth, at unfathomable depths, at inscrutable pressures, and at temperatures entirely unknown.—*The London Times*, August 22, 1906.

Albert G. Lane The startling announcement, on August 23, of the death of Albert G. Lane, district superintendent of schools in Chicago, brought with it a sense of grief and personal loss to, literally, thousands of

persons. In Chicagō, in Illinois, and in the wider circle of the National Educational Association, Mr. Lane had been for more than a generation a central figure. No one of her merchant princes or railway magnates ever began to do for Chicago the great service that Mr. Lane has done thru a life filled with patient, devoted, and unselfish service for the city's children and the city's citizenship. Determined but never aggressive, sincere without being dogmatic, and persuasive with no trace of demagogery, Mr. Lane was a tower of strength. He was almost universally liked and universally trusted. The small group of destructive workers in Chicago, who for a few years past have criticised and attacked both Mr. Lane, his high ideals, and his trusted associates, only increased the general esteem in which Mr. Lane was held both in Chicago and thruout the country.

For the National Educational Association, the loss of Mr. Lane is the most severe with which it could meet. Since his retirement from the presidency in 1894 he has been a member of the Board of Trustees, and the executive officer of that board during the intervening years. To Mr. Lane far more than to any other man, or body of men, is due the present most satisfactory state of the Association's permanent fund. The wise handling of the unfortunate investments made in earlier years, and the admirable choice of new securities, were both his personal doing. The Association repaid his loyal service with its unflinching confidence and affection.

Not many months ago a well-known citizen of Chicago died, leaving a vast fortune behind him. It was chiefly in money and in money-values. Mr. Lane leaves to his city a far richer legacy—a pure and good life lived for his fellows, and an upright character tested and tried in every furnace that tempers the human heart.

**Superintendent
Chancellor**

Just as the last issue of the REVIEW went to press, it was announced that the new school board in Washington, D. C., had unanimously chosen William E. Chancellor, for several years past superintendent of schools at Paterson, N. J., to the superin-

tendency. This is a happy omen for the schools of the Capital City, and a return to the educational traditions that prevailed so long under Mr. Powell. Mr. Chancellor's election is a clear intimation that hereafter the public schools of Washington are to be administered upon an educational, and not upon a political or a personal, basis. Mr. Chancellor has had excellent training and experience; he possesses a will of his own and uses it for the accomplishment of high purposes; he is an eager student of education and its literature, as well as a prolific contributor to it. The choice is a capital one, and both Washington and the country are to be congratulated upon it.

We are now convinced by indisputable evidence, that at least one institution in the United States, called a college, is commercialized. It is not just now a very conspicuous college, but it ought to be.

This judgment is based upon a letter, reproduced below, which has come to us thru the principal of the New England high school to which it was addressed. It tells its own story. The italics are ours.

The EDUCATIONAL REVIEW can express its "thought of the proposition" in the one word shameful.

COLLEGE, March 29, 1906

DEAR SIR: Some days ago, I mailed you a copy of our testimonial booklet, also a copy of our new catalog. The same books were addressed the senior class of your school, in your care. It may be some time before the young lady is known who will be entitled to the scholarship offered. As soon as the matter is decided, kindly advise me.

A number of schools have written me their acceptance of the scholarship, and, in one instance, the young lady has been selected. I feel quite sure the method adopted will give us a most excellent grade of pupils and a most representative class of patrons. This assurance is suggestive of another matter that I am inclined to present for your consideration. So highly do I appreciate and value the judgments of our Principals of public schools, that I shall ask a few of them if they will not coöperate with me just a little further—but in this I do not wish to be a burden. I shall be glad to have them investigate the merits of the ——— College, and if they find it worthy, commend it to prospective pupils and patrons.

These principals have the best opportunities of any class of people to know the young ladies of their sections who contemplate going away to

school, and are the best judges as to who would make desirable pupils and patrons.

I shall offer you, as also each of the Principals who will thus favor me, \$50.00 for each pupil whose application you send me—money to be paid you on entrance of pupil in the fall. Of course, the young lady accepting the scholarship cannot be reckoned in this proposition.

I make the offer, as I cannot presume to ask your word and influence for nothing.

I am now taking out less magazine advertising than usual, preferring to use the money in the way indicated. We feel sure in this way we shall have a more representative class of pupils and patrons—and we shall have the Principals to thank for it, if they will coöperate with us.

If you are willing to thus represent us, I shall be pleased to mail you some additional books, and a few application blanks. In the space of six weeks summer before last, a gentleman secured nine pupils for the school. I am sure with but little effort you would do well.

Kindly let me know your thought of my proposition, and if you can consider favoring me.

Most cordially yours

EDUCATIONAL REVIEW

NOVEMBER, 1906

I

THE ROMANCE OF RELIGION¹

While the glories of Hellas are culminating and declining, a little commonwealth of husbandmen and herdsmen, intrenched on some slight eminences among the marshes of the Tiber, is gradually spreading its rule over the central Mediterranean peninsula. Its origins are lost in picturesque legend; but it steps forth into the clear light of history as a highly-developed political and military organization. It goes thru startling vicissitudes; it fights for its life against a seafaring power of Oriental origin which disputes with it the command of the Mediterranean; step by step it spreads its empire over the whole basin of the midland sea, absorbing not only Gaul and Spain and Africa, but Hellas itself and the conquests of Alexander; its mighty soldiers fall to quarreling over the spoils, and legion hurtles against legion in a series of civil wars, which bring to the front one of the most consummate geniuses, and many of the most striking individualities, the world has even seen. Finally, an astute politician inherits and realizes the master-thought of the genius aforesaid, and the Roman Empire becomes for some centuries a circle of dazzling light, encompassed by the thick darkness of multitudinous and menacing barbarism. But within the circle of light what incredible things are happening! High civilization and heroic virtue jostle with blind savagery, insensate cruelty, and monstrous vice. Now and then a great character seems, for a few

¹ From *Let youth but know*: a plea for reason in education—by Kappa (London: Methuen & Co., 1905).

years, to stem the tide of decadence; but the moment he is gone it rushes wildly onward with redoubled force. Among the adventures of humanity, if the story of Greece is the most wonderful, the story of declining Rome is surely the most tragic. A creeping paralysis seems to overmaster the human eye, the human hand, the human brain, the human heart, until a whole world of pride and glory sinks to ruin in hopeless debility and corruption. He must be a dull boy indeed whose imagination cannot be touched by this tremendous spectacle.

Meanwhile, while the Empire is at its height, there goes forth from the little kingdom of Judea the rumor of certain strange events said to have happened in the valley of the Jordan. A Teacher has appeared, calling himself the Son of God; has preached a humane and exquisite morality; and has met with martyrdom at the hands of His fellow-countrymen, thereby assuaging, it is declared, tho by no means extinguishing, the wrath of His Father against the sinful race of men. Gradually the doctrines of this Teacher, with the glosses upon them put forth by an early disciple, of a fiery dialectical and moral genius, permeate the thought of the Roman world. A subtle theology grows up around them, and an elaborate system of ritual and church-government. For the nicest distinctions of thought, and the most trivial divergences of practice, men are willing to fight with fury and to die in torments. The State, at first indifferent or hostile to the new religion, is ultimately conquered by it. As the power of the Roman Emperor wanes, that of the Roman Pontiff waxes. The barbarians who subjugate the Empire are themselves subjugated by the Church. The religion of Christ spreads slowly but surely to the extremities of Europe, until, with the dawn of the Middle Ages, we find a spiritual unity, or rather duality, replacing the political unity (or duality) of the Roman world. Under the Principate there were many faiths but one rule; under the Papacy, many rules but one faith.

Now it matters not in this particular connection whether we regard Christianity as *the* religion or only as *a* religion: its history is in either case equally astonishing. If it contain the one true and ultimate revelation of the origin and destiny of

man, how must we marvel at the dark counsels of the Power which selected this particular time and method of promulgating its designs. Thru countless ages, and over the whole surface of the planet, lived innumerable generations of men who never heard or dreamed of their true Creator. Then He revealed Himself to a particular Semitic tribe, thru a figurative cosmogony which, for many centuries, He suffered to be interpreted literally, and thru a code of conduct, excellent indeed, but not beyond the excogitation of human wisdom. The favored tribe kept its knowledge of the Creator jealously to itself, until in the fullness of time it pleased Him to extend to a wider circle, thru a mystical process of self-incarnation and sacrifice, the means of knowing and propitiating Him. Even then the revelation was extremely gradual; and it has remained to this day so partial that vast and populous regions of the earth are practically untouched by it, so obscure that even the people who nominally accept it are violently at odds with themselves and with each other as to its true interpretation. Before such facts as these, the human intelligence cannot but be lost in wonder. Until in the consummation of all things, man's reason is made one with God's, the rise and progress of the Christian religion must remain the strangest, the most incomprehensible, phenomenon of history.

If, on the other hand, we regard Christianity as only one religion among many—an emanation, like the rest, of man's reason and unreason, his fear and awe and yearning—then it becomes, to the eye of the imagination, no longer incomprehensible (save as everything is incomprehensible), but infinitely curious, picturesque, and pathetic. The product of the literary genius of a small nation and the moral genius of a single man, it has outstripped all its competitors in flexibility and adaptability; has taken on the mental coloring of a score of different races; has undergone every sort of corruption, and inspired every sort of fanaticism, of tyranny, of cruelty, of hypocrisy; has begotten hosts of admirable martyrs and not a few adorable saints; has withal laid lighter shackles on the human intelligence than any of its great rivals; and has consequently been, if not the cause, at any rate the concomitant, of the most

notable advances, moral and material, made by the inhabitants of the planet during the past thousand years. No other religion has reared such mighty temples, has developed so gorgeous a hierarchy, or has produced (often, it must be owned, indirectly or by way of reaction) so much glorious art and literature. To reflect that St. Peter's at Rome and the wooden meeting-house of a New England village spring from the same initial impulse, and are devoted, nominally, to the service of the same God, is to realize, in some measure, the manifold picturesqueness of this adventure of the human spirit which we call Christianity.

It sometimes seems to me that a great Christian church—St. Peter's, or a French cathedral, or Westminster Abbey—ought to be more impressive to an unbeliever than to a believer. To the latter it is the place of official communication with a Power which, tho inscrutable in its workings, has once for all revealed itself to man and entered into formal covenants with him. It is the symbol of a partial—the promise of a complete—solution of the mystery of existence. It is, no doubt, a gateway into the infinite, but into a definite infinite, so to speak, which has roughly mapped itself out, submitted itself, in part, to the exploration of the human faculties, and accepted a local habitation and a name. To the unbeliever, on the other hand, to whom St. Peter's is only the stupendous symbol of a world-hallucination—the monster soap-bubble of an illusory metaphysic—its significance ought to be, if not profounder, at any rate more human and more pathetic. Picture the gigantic effort that went to the rearing and the adornment of this fane; multiply that effort many-millionfold in respect of all the tabernacles, great and small, which faith, or policy aping faith, has reared and consecrated for the dwelling-place of omnipresent deity; think of the hopes and terrors which for myriads of souls have clustered round these shrines and sanctuaries; then conceive that the shrines are empty, the sanctuaries untenanted, the hopes as well as the terrors mere figments of human fantasy! When you have carried your mind thru this process, you will have arrived, not, surely, in "rationalism," but in a sense of inexpressible awe at the frenzied efforts

of man's reason to grapple with the problems of life and death, of sin and suffering, of the beginning of things and the end. Who would not think himself living in a fairy-tale if he could, for a single hour, take part with the crowd of living and believing worshipers in the Parthenon, or in the temple of Capitoline Jove or of the Ephesian Artemis? And would not the romance of the experience lie precisely in his unbelief? To the believer, the act of worship would be a piece of edifying, or merely prudential, routine; to the unbeliever from another age it would be a magical vision, partly beautiful, partly grotesque, and pathetic altogether. But in St. Peter's and St. Paul's—aye, and in the little churches I see from my study window—a cult is daily proceeding beside which the worship of Athênê or Artemis or Jupiter Capitolinus was a veritable "paganism," a village superstition. It has an incomparably longer and more tragic history, a host of more splendid temples, a more poetic and more sumptuous ritual, a thousandfold more highly-developed theology, and a world-wide instead of merely local or tribal dominion. If, then, this faith is, in my eyes, as much a delusion as the faith in the Olympian or Latian gods, how much greater, more amazing, more impressive, must this delusion be! If I can but read, or rather feel, world-history with that aloofness in which lies the very essence of romance, I need not go to St. Peter's or St. Paul's in order to experience the emotions of our imaginary visitor to a temple of pagan antiquity. Here, in my parish church, I may have the same sense of moving in an incredible fairy-tale, even while

the kneeling hamlet drains
The chalice of the grapes of God.

"And is this to be the outcome of an education in the 'romance' of history?—this 'aloofness' which regards Christianity simply as a picturesque 'adventure' of the human spirit?" No—neither necessarily nor commonly. My plea is neither for nor against Christianity, but simply for an education which shall beget and foster a lively sense of the miracle of existence. Such a sense is in no way incompatible with Christian faith. Modern orthodoxy has so accommodated it-

self both to scientific and to historic data, that there is no longer any need for deliberate obscurantism in the training of the young. I am pleading, at all events, not for, but against, irreligion. The heathenism of the average boy who leaves our public schools is the very thing that I deplore. It is bad for his morality, his efficiency, his happiness. It is a calamity to the individual, and a danger to the State.

II

ELEMENTARY COURSE OF STUDY¹

Historical sketch

Within the last dozen years various efforts have been made by individuals to formulate elementary and high school courses of study that would conform to the present demands of the industrial, intellectual, social, æsthetic, and moral conditions of the American people. None of the schemes have been more than tentative, and some of them have never been seriously regarded by a large number of educators.

Since the beginning of our Colonial life to the present, there have been courses of study in our colleges, academies, seminaries, town and country schools, fitted rather to subserve present interests and pointing in general to higher attainments beyond. The best, briefest illustration of the presentation of this phase of educational development, is to go back to the founding of Harvard, Yale, William and Mary, King's College, Princeton, and later colleges and universities, and compare their early catalogs with the ponderous tomes of today—to understand what once was and what now is. The same line of investigation pursued in regard to the elementary schools, graded and ungraded, would show the same ratio of rapid extension along the beginning lines, having their culmination, at present, in the differentiated courses in our great city systems. Whether this growth be spoken of as an evolution, a gradual expansion, or as an enrichment and options, the fact of its existence is beyond controversy. The present condition has grown out of the past, many streams from various sources having contributed to what we now have, and the future con-

¹ A course of study in the eight grades—By Charles A. McMurry, New York: The Macmillan Company, 1906. Vol. I, vii + 236 p.; Vol. II, 226 p. 75c. each.

Course of study and syllabus for elementary schools. New York State Educational Department, 1906. 172 p.

dition must come from the past and the present, whatever that future may be, and it is from the elaborate material now before the public that future courses of study will be made.

It should not be inferred that a course of study in the modern sense is a new thing in educational progress in this country. Such an inference would be a most violent presumption without any support whatever. So far as the writer has looked into the statutes of the older states, the legislative enactments, while general in their scope and character, did specify and prescribe the teaching of certain branches in the common schools, and frequently authorized the teaching of higher branches to such pupils as wished to pursue them. In the special charters first establishing city or graded schools, the minimum branches to be taught were in most cases specified, while sufficient latitude was given to local boards to include higher branches whenever deemed necessary. Out of such legislative enactments has grown, especially, the magnificent system of free high schools thruout the country.

In the city schools, since their crude organization, courses of study, either by the school committees or boards of education, were blocked out, adopted, and followed by the principals and teachers with slight variations, and the school reports for two or three generations, at least, show that the superintendents or committees worked out the courses of instruction with a degree of minuteness that oftentimes left the rank and file of the teaching force little choice, except to follow directions.

Thirty-one years ago, the County Superintendent of Scott County, Iowa, had conceived the idea of grading the country schools of that county, and he put his idea into practical operation, and from there it spread, until many of the states now have a state course of study that is followed generally thruout the state. The object was to keep the teaching force working in the same direction, and to accomplish as far as practicable uniform results. These courses of study have come to define the work with great particularity, so that inexperienced teachers can follow the outlines with a considerable degree of certainty.

Aside from the state courses of study, other work of more

enduring nature has been done by special committees appointed to make general reports on particular and definite lines of work. These Reports are known as the Reports of the Committee of Ten, Fifteen, and Twelve, respectively. These reports covered three phases of educational work in this country, rooted ostensibly on the demands of our industrial, economic, and prospective social conditions, projected forward into the supposed future demands of sound, sane citizenship.

The Report of the Committee of Ten was an attempt thru expert skill to formulate a course of study for high school pupils, and how much of each subject ought to be taught, and in what manner. The Committee of Fifteen undertook a somewhat similar task in regard to the organization and course of study and method of instruction for the graded elementary schools, while the Committee of Twelve handled the rural school problem from the same standpoint. In addition to these general reports, many special reports pertaining to college requirements have been formulated for all departments of study usually pursued in high schools, so that at the present time it can be assumed that nearly every department of study in the rural, the graded, and the high school courses of study, has been carefully mapped out and recommendations made for the guidance of teachers who have to execute the work.

Notwithstanding what has been done, the courses of study vary considerably in the different cities of the country, because each state as well as each city, is a law unto itself. Perhaps this is far better than if a rigid system of uniformity existed thruout the country. It is evident, also, that a question that has been attacked from so many standpoints is one of no ordinary importance. For several years it has very naturally occupied the thoughts of many of the educators and teachers of the United States.

Brushing aside all extraneous matter, the uppermost questions in elementary education cluster around these two propositions: (a) What subjects are best adapted to a pupil? (b) At what age in his development should he study any particular one, or all of these subjects, and how much of each should he master?

Ground plan

I shall endeavor to set forth in as clear a light as possible the educational ideas connected with an elementary course of study as advanced and defended by Dr. Charles A. McMurry. Working at such a question when cross-examination is impossible, one has to interpret and express in words what one thinks another means, when, as a matter of fact, the one who interprets may not reflect the opinions of the other. It is then thru a study of Dr. McMurry's writings and such general impressions as one receives thru brief conversations that an analysis of his views is, as the writer understands them, presented for consideration.

Even in such a commonplace matter as a course of study for elementary graded schools, there are certain primary notions existing in the mind of the one who makes the course that exert a dominant influence in determining what a course ought to be, making due allowance for the conditions under which it must be worked. There are two extremes in such cases to be avoided:—the ideal, theoretical course that disregards present conditions, and the practical that looks to immediate results quickly obtained and to be put to immediate use. The latter planners deal with the surface of things, while the former are usually before their age in their theories, and behind in their practice. In making courses of study, two ideas are continually striving for the mastery,—the remote and the immediate,—and most courses of study now in active use are combinations of a little theory and considerable practice. It was to mediate between these two extremes that Dr. McMurry has sought to combine the excellencies of both these divergent views, without overshadowing either, and his investigations have taken in the base and surface of the subject, as well as reaching upward to the summit.

To lay a foundation broad enough and deep enough upon which to construct a symmetrical course of study, such as our present and prospective phases of civilization demand, Dr. McMurry takes a rapid glance at the new educational material that either is now in our schools, or is seeking ad-

mission into them, and he estimates its value. This material may be briefly enumerated: as (a) literature suitable for young people; (b) natural science studies; (c) manual training; (d) physical culture; (e) vague notions of the fine arts; (f) kindergarten ideas; (g) an insistence in some quarters that the children should begin to place some stress on the mastery of reading, writing, and arithmetic. This enumeration of the crude material conveys no very definite idea, except that of a blur, until it is taken up and worked over, and all useless and redundant stuff cast aside. The historic phase of how all this has come about, gradually or by leaps and bounds, or wormed its way into the schools, despite the conservative tendencies and convictions of scholars and school-teachers who were governed by the traditions of centuries, furnishes a good sketch in educational theory.

This general movement is ascribed to the great awakening in applied science and the mechanic and industrial arts, creating in a sense a new material world. The most potent force at the bottom of this movement is society at large. It includes either a majority of the more thoughtful people, or a plurality of one of the different classes that make a portion of society a compact working mass. In shaping public policy it has its roots in human sympathy for the child, and what material he should come in contact with in order to fit him, as a political unit, into the industrial mass of which he is destined to become a member.

Emerging out of these two ideas and a clear recognition of the different conceptions of what kinds of actions—physical, mental, moral, industrial, social, artistic—contribute to make a full, rich life, with all of its many-sided interests, the school is made to take on phases of regular instruction entirely different from the notions held by the most advanced educational thinkers of half a century ago.

While looking at the multiplicity of material that is already in the schools now, or else at the doors of the schoolrooms waiting to be tossed in, Dr. McMurry sees clearly that lines must be drawn somewhere, and ropes stretched to keep out some very good material which is rejected on the sole ground

that common sense indicates, at least, a limit even beyond which it is dangerous to overload childhood. Every study, and different kind of school work, old or new, should run the gauntlet of criticism, or better still of experience and discussion, before it is permanently installed as a part of the regular system.

Under this aspect of the subject, the working out of a curriculum for the elementary schools is a very comprehensive as well as a very complicated problem. The real problem is that of selecting and adjusting the material to the varying capacity of infancy, childhood, and youth. A cursory view of the material that has passed thru Dr. McMurry's mind convinces one of the magnitude of the problem which he proposed to solve. To go over courses of study at home and abroad, to gather hints here and there from different educators, to sift and then to classify their ideas, to observe schools in active operation in Europe and in this country, to get at the center of each system and to observe its purpose, to work patiently for a dozen or more years over the most heterogeneous mass of crude material, and to organize it into usable shape, required infinite patience, rare judgment, and entire familiarity with every phase of the work, whether it pertained to the educative value of the material or the acquisitive and elaborative powers of the learner's mind. With definite ideas in advance he went to work on all this material to fashion it into shape.

Another caution which the author emphasizes is that experts in any line of work are disposed almost invariably to overload pupils, and overcrowding in quantity and variety of material follows, rendering thoroughness of work impossible. As it is, much of the work is scattering, scrappy, superficial, carelessly and slovenly done, and departmental teaching, it is most truthfully observed, is not different in its general effects upon the children from the over-pressure of the specialists in their zeal to heap great burdens on the children.

A thoroughgoing discussion of all the factors leads up to the main issues involved—how to simplify and to organize these different departments of work so as to secure thoroughness of knowledge and of discipline, and omit nothing

essential in the education of the child, and how to meet the needs of the growing child that he may enter upon his duties in life properly qualified to discharge them to the fullest extent. In such a discussion one can never see too clearly the full and distinct significance of the bearing of the subject, not only on the question under consideration and its interrelation with other subjects, but how profoundly it must influence the characters of our people.

Clear and controlling aims are the only means, so the author contends, that can bring order out of chaos. Each study must be brought under a critical analysis, and it must be interrogated by direct and cross-examination, and it must furnish a reason for its being a part of a scheme of instruction. By such an analysis with a clear, simple, and distinct purpose in view, it can be made to justify itself, or else it is cast out. Such a scrutiny will enable the organizing mind to consider it in all of its aspects in relation to all the other branches of study, and its general and specific bearing on the well-being of the child during his adult life. This process is designed to bring forward and put into prominence the essential features in each branch, and to show what may be reasonably expected from the study of each, and furthermore, to understand its functional relationship to all the other branches and with life.

By occupying a commanding central position from which the whole educational field can be surveyed, the maker of a course of study should be able to estimate educational values, and to apply the very highest expert knowledge in the theory and practice of manufacturing human character. When the controlling aim is once determined, subsidiary aims are easily disposed of, and the educator can turn his attention from the static phase of the question to the dynamic—methods, processes of work and results, both tangible and intangible. The view now is a comprehensive one stretching out in all directions, and it is such a one as is needed to educate people. From such a commanding standpoint, the school forces can be centered on a few strategic positions, and when these are once fully occupied, other minor points will be subordinated and absorbed in the major ones. Ideals are to be reënforced by the re-

sources of knowledge and right habits, resulting in the highest type of character.

All subjects in a curriculum have not the same weight or educative value, whether viewed from the content of their matter, or the force with which they sharpen and give strength and durability to the powers of the mind. The main lines should be kept open and in good condition, but springing out of these are many by-paths which connect with the main lines as side-tracks. These detours are never to be raised to the dignity of independent branches. The working hypothesis is that the leading topics in history, geography, literature (reading), elementary sciences, and mathematics, spring from common sources or centers. They are not, so it is contended, distinct studies, but phases of great topics common to all studies. The "Revolutionary War" is a conspicuous example of a common center whose spokes, so to speak, branch out into all phases of colonial life. The feudal period in Europe has many lines, each of which may be pursued profitably in relation to all the other factors involved. The real meaning is that each so-called branch of study may be used to throw light on and to explain certain phases of every other subject.

The tap-roots of all studies reach backward and downward into what is denominated a few great social ideas and institutions, as centers, about which all studies may be learned; and the interrelation of how each subject runs into and intertwines its roots with all its congeners is the complex piece of mechanism that Dr. McMurry has set himself to untangle.

The scope of the work

After clearing away the rubbish and putting in the foundation, the next step is choosing the material that should be used. This is really the practical side of the subject, and upon the selections made and the shaping of the material into form for use will depend, in a large measure, the success of the entire undertaking. The scheme embraces ten different sets of subjects as groups, not independent, but each dependent and closely related to other subjects. This union is not artificial,

but organic and vital. No one subject shall minister to itself alone. Interrelation and interaction and interplay of one thru the others, and the others thru the one, is a vital condition in the educational process.

The subjects in the elementary course are: Oral work in literature, reading, language, memory selections, history, geography, elementary science, arithmetic, the handbook, and the manual arts, for the four primary grades; and for the four grammar grades: reading, language, memory selections from literature, history, geography, elementary science, general lessons, arithmetic, and the manual arts. The grammar grade groups are extensions of the primary grades, viewed from a higher outlook. To get at the core of the matter, it is necessary to advance over the route with the author as a guide, keeping in mind constantly "that the vast army of facts are merely the subjects and playthings of the few kingly ideas." That facts stand near together in text-books is no evidence that they have the same rank. They may differ in importance and significance far more than the men one meets on the street hurrying by. Types must be studied as extending and aiding in rapid reviews in classification. Thus is knowledge made sure and lasting.

Oral work in literature

The plan here recommended in the first three grades is that of story-telling by the teacher. At first a story is told in a simple way to the children, and they are to retell it. These stories are selected chiefly from standard tales of folk-lore and fairy tales; a higher order is used in bringing in some personal adventures in the second grade, and moving on to various myths and legends in the third grade. It is held that this kind of work is very valuable for word-building and thought material, and that it contributes materially towards making the schoolroom a happy and homelike place; that it also furnishes the best possible contribution to the proper and discriminating use of language.

During the first year, fifteen different stories are told to

the children, and fifty-nine books of materials for teachers are listed. In the second and third grades, the scope of the exercises is enlarged and additional readings for the children and books for teachers are recommended. This work supplements the regular reading exercises thru the four grades. A few books are to be read by the pupils quite carefully; others to be dipped into as sight reading; and others again are used for certain selections contained. No school or teacher can use all the books selected. The lists are advisory and not compulsory.

Language exercises

The language work in the corresponding grades is based on reading, story telling, nature study, manual arts, spelling, and writing. It is held that such exercises afford the very best material for linguistic culture. The use of correct forms is insisted upon, particularly with verbs, pronouns, adjectives, and adverbs, and the complex forms of the mechanics of language structure are learned. The directions are mainly in accord with those printed in courses of study for city and rural schools.

What is herein recommended, or suggested, is confined almost entirely to the use of language as a vehicle for carrying ideas, without evoking any serious attempt at thinking of it as a structure whose parts should be looked into for the purpose of knowing how they fit together and serve human interests. Children are not expected to investigate language structure as such, in the elementary grades. *Memory selections* are recommended as a means of storing the minds of children with short poems, ballads, proverbs, and choice extracts of the world's best thoughts. In harmony with the best plans of teaching only the best things should be memorized. These are to be committed to memory, and held there as a reserve supply when needed in after life. The acquisition and retention of this material belong to that phase of education as portable memory work. The poetry selections are chiefly characterized by their simplicity.

History

The subject of history is one of the best worked out in the entire series. The proposition is laid down that "History in our common school should begin with America and end with America, with such incorporation of European history as will give the necessary breadth and variety of culture."

The number of books and parts of books for children to read bearing directly or indirectly on certain phases of biography and history is enormous, whether viewed from the standpoint of the learner or of the teacher. Yet it is materially simplified, from the fact that historical matter is arranged in parallel lines, and that one kind of treatment of any subject may be associated with kindred topics, and out of this formidable mass of material, it is really organized into departments that are so adjusted to one another as to form a continuous and consistent whole. The sphere of action on the earth is confined almost exclusively to Europe and North America, and particularly to that part of North America in which we live.

The children, at the end of their elementary course of study, are given a composite view of civilized life from the many different pictures that have been presented, under so many diverse phases of treatment. The effort has been to bring them up in historical knowledge so that they can interpret life and all its activities in a reasonable way, and in terms of their own thinking. To be able to give a rational account of how institutions, usages, and customs in this country have come to be what they are now, and the probable trend the most of them will take in the future, are some of the issues that are involved.

Geography

The subject of geography is worked out better than any other branch in the course. The general plan is that of movement from the home out into the great divisions of the earth. The central truth is that of beginning where the child is, with the objects in nature with which he is acquainted, that ever

growing conception very dim and very obscure at first,—that the earth is his home,—and that it is the home of all the life now living upon it, or that ever has lived, or ever will live, upon it; that the subject deals chiefly with the individual in his present physical, intellectual, moral, social, and industrial environment. But everything connected with the earth and its surroundings becomes an object of deepest interest to him. He looks upon the earth and what it contains, at all the vegetable and animal products that abound upon its surface, as the abode of men, their food, clothing, shelter, occupations, forms of government, intellectual, moral and religious conditions, their struggle for supremacy over each other or the forces of nature, and as so many contests of strength, skill, and endurance.

To study a people, he soon, if properly directed, begins to investigate the climatic conditions, the soil, the food, and what, under the environment, the inhabitants can do in order to secure the comforts of life, and have leisure time for artistic culture. Geography opens up more channels for the gathering in and classifying of facts than any other one of the chief studies in the elementary course of study. Its importance is not unduly emphasized by the author, who has followed rather closely his *Special method in geography*.

Elementary science

Recognizing the somewhat chaotic condition of nature study in the elementary schools, Dr. McMurry proceeds to pick out a few centers from which systematic work may be projected, and upon which the efforts of both teachers and pupils may be concentrated. The contention at the outset is, that the individual teacher should be relieved, in a large measure, from selecting, arranging, and presenting material. Much of the confusion now found in a considerable number of schools is due to the "go-as-you-please method" of putting all kinds of topics into the elementary schools under the general head of "Nature study." Whether the specialists in the different departments shall collect, select, arrange, and direct the instruction, is one of the problems that has to be wisely considered.

The point to be guarded is that of over-shadowing zeal displayed by specialists,—each seeing an entire scheme of studies in his particular line.

It is really a very curious problem to require teachers to work up and administer a course of instruction in any one branch, whose principles and teachings they have not mastered. Too many have been enthusiastic without knowing exactly what they were enthusiastic about. To go about this whole matter in a rational manner with a good prospect of success, the teacher and pupils must concentrate all their energies on the accomplishment of certain definite results that are self-centered. It is believed that the centers from which the best work has been done are those connected with health and physiology, cookery, gardening, domestic animals, grain, grasses, fruits, and other products connected with food, clothing, and shelter.

Everything must be built on the pupil's previously acquired knowledge, in order to bring it within the range of his past and present experience. The acquired knowledge is the foundation upon which all subsequent acquisitions must be based. The sources of knowledge must be easily available, differing according to the environment of the neighborhood where the school is located. Wherever the school is located, certain aspects of nature are always present: the earth's surface, the atmosphere, heat, cold, moisture, the sky, overhead by day and by night, the seasons, the coming and going flight of birds, the occupations in which the people engage, their social and intellectual pleasures, all combining to fit the learner for doing his part in life's work. Such beginnings will raise an immeasurable number of questions in every child's mind. He wants to know what is down in the earth. Should he go off millions and millions of miles into space to the planets and stars, what would he find there? It is the desire to know, and to know without doubt, what these things so hard to get at, or to get to, are. It is in this domain, too, that the child becomes the patient observer and recorder of results, and later on the investigator of certain phases of phenomena.

General lessons on current events

The author would set apart a small portion of time for general instruction in the world's daily progress. This exercise should embrace a wide scope. It carries many lessons from the regular studies into practice over into life. The school becomes, in a limited sense, a part of the world as it is made to touch the lives of nations in their activities on land and sea. By working out and organizing and presenting new lines of study, it is believed that teachers will become generally more alert than they would under the operation of a fixed routine. In a short way, it may be summed up as introducing the daily news, under judicious selections, into the school-rooms, graduated always by the age and attainments of the pupils.

Arithmetic

As compared with the treatment of several other topics, this subject is not very elaborately presented. The method of treatment is due to the carrying over of many applications of the subject into other departments, and grouping around other centers. The way is smoothed for getting at processes and eliminating obsolete matter, perplexing problems, and all such things as once required pretty tough work to do.

The steps are all very short and the work light, demanding little time for its accomplishment; but it is turned chiefly in the direction of practical things. Material for work is to be drawn from many sources, and the number art is applied to the quantitative measurement of many objects. Mental arithmetic is introduced sufficiently to give enough backbone to the penciled arithmetic to make it stick. In the two highest grades, the work is broadened so as to take in municipal, state, and national expenses, the cost of wars, immigration, and other related topics.

The hand-book

In Volume I, a chapter of fourteen pages, called *The hand-book*, is inserted as a guide in instruction and discipline for teachers. The directions, suggestions, and reflections are all

good, and founded upon the latest educational practice. The statements are concise, clear, and pointed. With teachers generally, after reading this particular chapter, there will be a strong feeling of "wanting more." The chapter on the manual arts is inserted to fill out the volume and was not arranged by Dr. McMurry. It is short and direct.

The course of study and syllabus for elementary schools of the State of New York embraces English, arithmetic, geography, American history, drawing and manual training, physiology, nature study, and agriculture. So far as subject-matter is involved, it covers the same topics as are submitted by Dr. McMurry, but the method of treatment is different, and in some cases very pronounced. Both schemes agree in this, that the work is outlined each year for both teachers and pupils, and suggestions given to the teachers how to proceed.

English

This course is made to include reading, literature and language, grammar, spelling, and writing. Briefly the underlying idea in this department involves: (a) imitation thru correct practice on the part of the pupil; (b) to repeat or drill on that practice until a certain skill has been attained; (c) upon this practice to formulate rules of procedure which shall be helpful in securing further practice that is more intelligent, more skillful, and more independent; (d) that the pupil can apply his knowledge and skill to wider areas of the subject after each recitation. The dictum for the teacher is—to have the pupil read, reproduce, imitate, create ideals in his own mind. The result will be habit forming under the plan of work.

Books, not a large number, have been selected covering a rather wide range of subjects. In teaching reading in the primary grades, the leading fact is for the pupils to secure the mastery of the words found in the little books read. The order is the idea in the sentence or paragraph, the representation of the idea, its interpretation, and the correct oral expression.

The details are explained in such manner that a teacher of average intelligence can understand them. As a hand-book, or manual for the guidance of teachers, the outline in English, from the standpoint of construction and arrangement, bears upon every page the impress of minds that knew quite well how to outline a course of study to secure certain definite results, and to tell teachers how to go after what is required, keeping in mind the working and the assimilating powers of children's minds. The child's knowledge is thus added to each year, and when he has finished the eight grades, a pretty compact body of knowledge—definite, tangible, and usable—has been built up in his mind, and it is a part of his mental furnishing.

Arithmetic

This subject is briefly treated, and it emphasizes the drill side as well as the thought side of the subject. Great stress is laid on skill in the fundamental processes. The chief idea is that when a pupil is studying and reciting arithmetic, he is dealing with that subject, and that he must concentrate his attention on what he is doing, regardless of every other thing in the world. Enough illustrations are to be used to illustrate, but the illustrations are never used to overshadow the principles involved. There is no evidence of squeamishness in regard to giving the lower grade pupils something to do. All thru this course, large discretion is given to the teacher, but enough is stated by which she has a good standard to measure the progress of her pupils.

One thing for which teachers of arithmetic, following either this course or the one given by Dr. McMurry, will be thankful for—the entire absence of a long list of reference books to be read or referred to. The teacher is left to plan her campaign according to the advancement of the children and the temper of the community in which she works.

Geography

The thirty-one pages in this Manual given to geography, beginning with the third grade, are well worked out, and show

the same patient thought that is so well exemplified in the chapter on English. In a word, it is a safe, conservative, and workable system which the average child can master fairly well; or at least get some very substantial and accurate knowledge of the subject, if he is kept down to business. The three-step method of procedure, while not so stated, is present as the dominant thought and purpose of the work, namely, develop, drill, connect and solidify the new knowledge with that previously acquired.

American history

This subject is elaborately worked out in thirty-one pages for the four upper grades of pupils. It represents a moving panorama of peoples, situations, and conditions, sketchy and attractive; at first, in bold and rugged outlines, shaded and toned down thru struggles, hardships immeasurable, combined with heroic courage, till the country is teeming with millions and millions of people from the shores of the Atlantic to both sides of the Pacific, and from British America to Panama. At first glance, it looks formidable, but when one remembers that it is spread out over four years, its dimensions contract.

Perhaps no other State course in United States history has embodied an old adage in history better than this one, namely, history has two eyes, geography and chronology, *place* and *time*. With maps and charts made by the pupils so that events may be followed locally thru time and place, connecting activities, the scheme herein presented ought to yield satisfactory results in the acquisition of knowledge without entering into the motives impelling the men to plan such undertakings. The chief object seems to be to chronicle and to narrate events as related to the general progress of the people composing the United States, without entering upon the deeper and underlying sources of our country's history. The idea appears to be that there is a difference between the kind of history that school boys and girls should read, and that higher aspect of the subject which can be pursued by disciplined and mature minds trained along special lines of work.

Drawing, manual training, nature study, and agriculture are

treated comprehensively enough for ordinary purposes. The foundations are laid for future work, but should the pupil stop at the end of his elementary course, he has had a taste of what lies beyond, which may be a sufficient incentive to induce him to apply what he has already learned, and perhaps to pursue his studies into more advanced realms.

The two chapters are carried out in detail much further than is done in the brief chapter in Dr. McMurry's *Syllabus*, and can only be compared by contrast, were it necessary to do so.

Comparison and suggestions

The writer has ventured to present somewhat in detail the salient features in each of these courses of study, both covering 624 pages of printed matter, in order to reflect the ideas each embodies as to what children should do in the elementary schools, particularly in the grades to which Dr. McMurry confines his discussion, and the New York School authorities to the elementary schools of the state.

Two different methods of procedure are plainly recognizable in the construction of these two courses of study. Dr. McMurry bases his course on the doctrines advocated by Herbart and Rein. He reflects the ideas of that school of thinkers in this country, and he is the chief exponent of these two German thinkers. The educational literature, making known to American teachers the doctrines advocated by Herbart and Rein and their followers in Germany, and their apostles in America, as translations and original contributions, is enough to make a good-sized educational library, and this course of study for the elementary grades may be taken as Dr. McMurry's present convictions, based upon his observations and school-room experience with children during the past fifteen years, in which he has been testing theories. It is not my purpose now to discuss the educational theories of Herbart, Rein, and others of that educational faith, but to confine my observations to a course of study which indicates what and how much material should be presented to children of average ability, such as are collected in the graded and ungraded schools of this country.

It appears to me that the greatest objection to Dr. McMurry's course of study lies against the conception that it tends to dissipate the energies of the pupil, rather than concentrate his mind on a definite portion of knowledge that constitutes a part of a subject. In saying this, I admit most freely that Dr. McMurry has put in many valuable hints on organizing the material and how to present it, and how to stimulate the teachers to give greater breadth and vitality to their work; but to my mind, it is equally evident, also, that confusion will be introduced into the child's mind by the very multiplicity of the material that he brings forth for the teacher to choose from, and that his plan will mystify and bewilder the teacher who attempts to carry it out, with even a partial degree of fullness which he outlines.

My meaning will become clearer by referring more directly to certain subjects which he has presented most fully. In oral work in literature, first grade, fall term, there are six stories told to children, five during the winter term, and four during the spring term. These fifteen stories are to be practiced on daily, told, retold by both the teacher and the children till the children can reproduce them with a fair degree of imaginative faithfulness. Just following these stories are fifty-nine different books listed and the publisher of each, for the teacher to draw material from. This is first grade only. This formidable list of books for teachers is most likely, I think, to strike terror into the hearts of teachers, rather than to produce a sudden burst of enthusiasm. Would not a little of this kind of material go a long way in the building up of even a book education in one's mind? Is it the material that has much strength or consistency in it? Has it ever made any strong characters?

During this period, the child is expected to read two or three standard first readers thru, and do considerable "sight reading" from other books. He has oral language exercises, drawing, singing, writing, and spelling, three of these are incidental to other work. The same circle is enlarged each year. At this point the inquiry is raised, and it is indeed vital,

is such a scheme anything more than a source for the dissipation of a child's energy?

It is assumed in this course that a great deal of material of a heterogeneous kind must be introduced to bring the child into touch with life on all sides;—it must be a many-sided interest. Here also springs up another inquiry, and that is, does one ever educate himself by reading scrappy bits of printed matter, on a great variety of subjects? If the aim be moral or ethical, both used in this connection for the same thing, I submit that the moral instruction in Sanders's *Series of school readers*, or Goodrich's *Readers*, or Butler's, or McGuffey's *Old series*, did contain more soul-lifting and higher class literary selections than the hundreds of little, flat story-books recommended for both children and teachers thru these four hundred and fifty-two pages. There are more choice extracts to stir the hearts of boys and girls in any one of these old series than in the entire lists in these two volumes.

Of course fifteen hundred or two thousand books could not be mentioned without getting some very good ones, but the list is so large that it discourages, and it will have a deadening effect upon any conscientious teacher who attempts to compass any essential part. A teacher who attempts to carry it forward along the lines represented in language, history, and science, will have a bigger load on her head, shoulders, back, and in her heart, than Christian had when he knocked at the Gate.

To learn is very much like massing batteries on an enemy's position during a great land or naval engagement, or a military siege,—the concentration of shot, shell, and shrapnel till the fortification, flagship, or position is rendered untenable, or is destroyed. A similar plan of tactics must be followed in order to teach children to stand squarely and firmly on their feet in their studies. Even in manual training work and domestic science, it is one thing at a time, until it is well done. If the pupil scatters, makes misfits, or spoils his piece of material, he must do his work over, and he is kept at it till he does it according to directions. He is not permitted to flit from one thing to another at the pleasure of his capricious will.

If we consider for a moment the process of learning to read, it resolves itself into three steps or stages for all practical purposes:—the first is obviously to gain knowledge—to know the forms of the written or printed words. While doing this, he is learning to pass from hearing words to seeing them represented by symbols. Then, it should be remembered, too, that perhaps as much as sixty per cent. of all his knowledge of the external world that he will ever acquire must be gained thru the eye, and not to exceed one-half of that amount, of his conceptions, will reach his mind thru the ear. The various devices used by teachers for instructing beginners are not dwelt upon in this connection, but simply referred to as part of a process.

The second step is to give the child power to grasp the meaning, to extract it from each sentence and paragraph, as he goes thru it. At this point, it is the quality of the reading that is of greatest value. Racing thru books, whether by grown people or by children, is a most pernicious practice. It weakens instead of strengthens mental power. Of course, the child must get what may be called the mechanics of reading at first, to know words instantly and to be able to pronounce them correctly, and he must be taught, drilled on many things till he gets control of himself, before he can begin to read very much. This is so, because reading, if aloud, is the expression of thought and feeling by utterance and action. It is also a science and an art, and as such it should be taught to the children in our schools.

This leads on to the third stage of reading, aside from feeling the thought in silent reading, fluency in reading,—that the child should always read so as to be heard, understood, and felt. These results must be secured either by selecting a few good books, books of real literary merit, books on elementary science, simple biographies, books of adventure and travel, and then readers in the upper grades being studied and read, having extracts of higher literary merit, in order to bring about the results desired.

In my judgment, if I wished to produce superficial scholarship, race-course reading, sauntering thru subjects that children ought to study but do not study seriously, then Dr. Mc-

Murry's course for elementary schools is one of the very best schemes yet published for a sauntering journey thru the elementary schools. Now, what is true of reading, holds intact in regard to each of the other essential subjects in the course.

It is freely admitted that one subject, or several, may throw sidelights on many portions of a special subject that is being studied by a class of pupils, particularly in the upper grades, but these aids should be introduced as incidental digressions—side tracks—to the main lines. To put this thought more forcefully, when pupils are studying and reciting geography, the facts of geography should be the chief objects of interest in the lesson. The aim is geographical knowledge—the fundamental conceptions underlying the conditions that will build up in the learner's mind large ideas of the subject, in its general outlines as well as much information in detail. The teacher stands practically at the beginning of the journey with the child, and in making that journey it is important not to strike off on every hog, sheep, or cow path, that diverges from the main road, to see what there is off in some thicket, cave, or hole in the ground, however valuable such little excursions would be for the specialist who leaves main lines of travel later in life.

Certain studies are, as I believe, inherently fitted to develop certain habits of mind, which definite knowledge is necessary for one to know certain things well. It is not so much reading in quantity that makes a child's mind firm, well-balanced, and self-poised, as the quality and amount of thought he puts into his studies as he goes along. There are, for instance, three subjects, at least, in an elementary course, if properly taught, that yield high results in close reasoning. Definite data are given in all essential points and from what is given in each specific case, exact results or conclusions follow,—unless repugnant to reason. These subjects are grammar, arithmetic—practical and mental. In geography and history, the child's reasoning faculties must be exercised more or less, if these subjects be intelligently presented; but the imagination in all the higher phases of geography is called into play, and in history another feature, the ethical, occupies a large sphere in

real history teaching. Geography and history are designed to give world views, and to fit the pupil for hearing both sides of a question and weighing evidence; but the training in grammar and arithmetic acts as a preparation for throwing out elements that are not involved, whenever an issue is presented to establish or to oppose a proposition, whether simple or complex. All thru the branches principles are learned inductively, but applied deductively. However, the natural science feature is designed to make the pupils observe,—not so minutely observant, but to open their eyes to the common things of life, and to learn something about them. A child has not the patience to record observations day after day, and so on for years. He is interested in the present and the immediate, not much in remote or final results.

I believe it was Dr. Johnson that in his blunt way of speaking expressed this thought: "If I had read as many books as some people, I would be as great a fool as they are." This contains a partial truth, at least, and it is worth while to think it over. Some of the most helpless people I have ever met, were "book helpless." They had absorbed so much from books that their brains had no room to work on any subject. Instead of having mastered some good books, they had been completely mastered by all sorts of books, and were as helpless as a turtle turned on its back on a level floor.

The New York State course of study for elementary schools, in some parts is loaded up too heavily; notably is this true in geography and history. The history list is bewildering, but, like a bill of fare, one is not obliged to take it all, except eye-ward, and not internally. Dr. McMurry mentions about all the books in elementary science, literature and reading, geography and history that have been issued from the press during the last twenty years.

It has been the writer's good fortune to have read some very good books, and no inconsiderable portion of them have been biographies and autobiographies of distinguished men and women, and some of these are still living, or have died very recently, but he failed to find, except in very rare cases, that any of them read such a heterogeneous hodge-podge as is prescribed

by Dr. McMurry. A few novelists or historians were voracious readers, and yet they read with a purpose in view. But so far as the writer now recalls, not a single scholar, whose attainments possessed any solidity, pursued such lines of least resistance.

Abraham Lincoln, when a boy, read the Bible, Æsop's Fables, *Pilgrim's progress*, *Robinson Crusoe* and the lives of Washington and Henry Clay. He had learned to read, cipher, and write prior to this. Later, we find him studying Euclid and practicing surveying in the neighborhood where he lived. It is now admitted by all that his mind was fairly well enriched, and that he was master of himself. James A. Garfield's reading in childhood was confined chiefly to the Bible, and the benignant influence of a good mother. General Grant simply grew up to be a sturdy, self-reliant boy. At seventeen, he was a fair scholar for his opportunities, but he knew a great deal more about horses and how to manage them, than of story books. He knew how to work hard wherever he was.

From historical evidence, it appears that Henry Clay's educational opportunities were very limited indeed, and Andrew Johnson had no book learning at all till after his marriage. Peter Cooper's, too, was of the scantiest kind. Daniel Webster was a puny child, but a voracious desultory reader. When he entered college he knew something of Latin, a very little Greek, and next to nothing of mathematics and history. Dr. W. T. Harris was practiced very much on the short pithy sentences in Webster's *Elementary speller*, and he is the best read man in the United States on all kinds of reading worthy of the name. Dr. Asaph Hall, the famous astronomer, learned the carpenter's trade when a boy, and after some private study, at the age of twenty-five, entered college. Alexander Hamilton was taken from school at twelve and placed in a general store, and in two years he was put in sole charge of it for several months. He lived with Pope and Plutarch while in school. Henry Wilson, a man of no mean attainments, was apprenticed to a farmer till he was twenty-one. Both John Sherman and William Tecumseh Sherman received very irregular, but not very complete common school education in boyhood. Stone-

wall Jackson was badly prepared when he was appointed to West Point, and barely "squeezed thru" his entrance examination. He stuck to his work, and was certainly the most brilliant and the most unique character that our Civil War produced.

It is generally admitted that John C. Calhoun was logical in his reasonings, granting his premises. The modes of thinking in which his early years were spent may have compensated for the lack of school facilities. There were no academies or schools, except a few scattering ones, in the frontier region where his parents lived and these taught only reading, writing, and arithmetic. At the age of thirteen, he was placed on a secluded plantation, owned by his brother-in-law, where he read Rollin's *Ancient history*, Robinson's *Charles V.*, Voltaire's *Charles XII.*, Cook's *Voyages*, and a small volume of *Essays* by Brown, and just dipped into Locke's *Human understanding*. At nineteen, his education, except some miscellaneous reading, had been confined to reading, writing, and arithmetic, and his knowledge of these was very imperfect. By studying hard now, his progress was so rapid that in two years he entered Yale and graduated four years later with distinction.

Perhaps one of the most widely read and most thoroly versatile men of modern times, was Henry Thomas Buckle. As a child, he felt no interest in books except in Shakspeare, Bunyan, *Arabian nights*, and *Don Quixote*. These were the books on which he literally feasted. These constituted his reading up to the age of eighteen. Before his death, his private correspondence reveals the breadth and depth of knowledge of the 22,000 books in his library, and what he had accomplished in the brief space of about twenty years. Another remarkable man was W. Stanley Jevons. No spoon victuals in his mental diet!

If I have gleaned a single bit of sound educational information from an investigation of the lives of men, whether living or dead, it is that concentration of thought, intensity of investigation, thinking carefully and patiently over what one reads as he reads it, or stopping to master it and making it his own, is the only kind of reading that is of any permanent value. Some minds take in and assimilate knowledge much

more rapidly than others, and can cover more books and do it well. It is not so much reading, but well chosen, solid, substantial reading, that builds up the character into manhood and womanhood. Fifty or a hundred good books, well chosen, if read and mastered and assimilated, will give one far greater power and versatility than thousands of surface, scrappy, mediocre books. The "scatteration" theory has taken such a hold now upon many of our educational writers, that one can get, in reading most of the late books, only a rehash of what the author has gathered from various sources, and at the close of each chapter, or at the close of the volume, a bibliography that is absolutely overpowering.

Not long since, one Saturday evening I was standing in a second-hand book store in Kansas City, and a very black negro man and two negro women came, and they were looking at books. The women and the man each had a basket of provision for Sunday. The man was a day laborer. He picked out a book that he wanted, and then he spoke as follows: "Mr. Cramer, I want this book. You know I am a *deep man*. I read *heavy stuff*, I do! But my people are all running to light stuff! They don't get anything out of their reading—out of light stuff! I am sorry for my people, but 'fore God it is a fact, Mr. Cramer! You know I come here every Saturday night to get my reading, just as sure as I go to the market to get victuals for Sunday and most of the week. You know I read *heavy stuff*. Last Saturday, I got Milton's *Paradise lost*, tonight *Paradise regained*, and here I pick out this book for next Saturday night if it is not sold—this astronomy. *It is heavy stuff, and I am a deep man, Mr. Cramer!*"

A dozen or more white men and women stood, listening to this black man's conversation. At its conclusion, I went to him and learned more of his life. A man of forty-five, he was struggling upward out of the trashy reading into a higher, cleaner, and purer literary atmosphere. He wanted both knowledge and power. But he is not the only man who is beginning to see the deleterious effects of mental dissipation and mental indigestion.

JAMES M. GREENWOOD

III

REFORM OF ELEMENTARY NORMAL SCHOOLS IN FRANCE ¹

Recent decrees and regulations, dated August 15, 1905, have made appreciable modifications in the administration of our primary normal schools and have introduced therein some auspicious changes. The aim of the new system is to lend strength to the professional character of these schools so as to produce teachers, men and women, possessing, if not a greater quantity, at least a higher quality of preparation and a better training for the duties of instruction and education.

The curriculum that has just been remodeled had been in force for some twenty years, dating from the time when, under the sway of democratic ideas, France was sown with schools and when, to meet the need of recruiting a staff of teachers, far greater in number than before, the normal schools were multiplied so that there were two for each department, one for men and one for women.

In all these schools the system followed up to the present made possible only a single cycle of studies pursued three years and leading the normal school students having the *brevet élémentaire de capacité* (preliminary certificate of ability) with which they must be equipped on entering the school, to the *brevet supérieur* (higher certificate), which was for them the final test and the supreme sanction to their studies.

Henceforth the new system, which went into effect even with the present school year, divides the normal school studies into two cycles. Two years are to be devoted to studies of general culture. The third year is to be set aside especially for the professional education of the instructors-to-be and also for the furtherance of a free and non-specialized general cul-

¹ Translated from the author's manuscript by Lawrence A. Wilkins, University Scholar in Romance Languages, Columbia University.

ture. The normal school students—the *élèves-maîtres* (student-teachers), as we say in France—will present themselves at the examinations for the *brevet supérieur* at the close of their second year of study. They will be admitted to entrance upon the third year only when they have passed these examinations. They will not thereafter be haunted by the dread specter of an examination to be passed or of a ranking to be attained. They may give themselves up entirely either to the acquisition of general knowledge that will extend the horizon of their thought and open up their minds to the great questions of social life and modern education, or, preferably, they may devote themselves to practical exercises, to the testing of their pedagogics, by which they will begin to master their profession as teachers and to practice it under the direction and supervision of their professors. Thus they will no longer be candidates for an examination; they will really be apprentice teachers.

The reform, then, consists really in the organization of the third year, and a sharply defined curriculum determines how the year is to be spent, no matter whether professional education or the perfecting of general culture is to predominate.

Professional education—Of course in the first two years the professional education of normal school students is not neglected. It begins *indirectly* in the fact that they learn thoroly what they are to impart later in an elementary form to the children of the lower schools. Knowledge is by this time an element in itself of professional education, particularly when it is acquired logically and methodically as it ought to be in a normal school. As they listen to recitations conducted by skilled and experienced masters in the various branches of instruction, the apprentice-teachers are already learning how to compose a lesson, how to link together bits of knowledge. They are initiated into the art of instruction. When they become instructors and masters, often all they will have to do will be to recall and imitate, with adaptations for the use of their young pupils, those models of exposition with which their professors in the normal school will have provided them in well-made courses.

Not until the third year, however, will the professional education really begin by *direct* means. Three methods especially are followed:

1. The *élèves-maîtres* will be trained under the direction of professors of each specialty in preparing by themselves, not learned and pretentious lessons, but simple and familiar ones, lower school lessons of the kind which elementary instruction requires.

2. Not as dogmas imposed upon their docility, but as cases proposed for their investigation and criticism, they will study current methods of education and processes of instruction. This investigation will be made in courses and lectures on pedagogy which the director or directress of the normal school will conduct.

3. Finally, they will set to work in earnest. They will be sent to conduct recitations in the practice schools. They will be placed face to face with children and called upon, even now, to practice teaching under the direction of their professors.

Let us return for a while to each of these points in order to understand better their importance and their meaning.

The normal school has for its one aim the making of teachers. To attain this result, it would be out of the question to depend simply upon the experience which an educated man of good general culture may get at haphazard and unaided in the class or school intrusted to him. The first generations which he has to teach and rear must not be the victims of his inexperience. From the very first day, the student who goes out from the normal school must be familiar with at least the basic principles of his profession. He should have only to perfect himself in proportion as personal practice develops his skill. Before he is thrown into the water he should be taught to swim. So, before being placed in contact with the reality, that is with a class of pupils to control, it is necessary that the future teacher first be drilled, in the absence of children, to give at this time the instruction of which he will have actual charge within a few months. He must be accustomed to transpose, as it were, the knowledge which he has gained, to

CURRICULUM OF NORMAL SCHOOLS FOR MEN

SUBJECTS OF INSTRUCTION

First and second years	First year	Second year	Third year	General culture	Professional education
Psychology, ethics, applications	2	2	Ethics and education, pedagogical doctrines		2
French language, literature, and composition	5	4	Theoretical pedagogy, elements of law, political economy	1	
History and civics	2	2	Literature, composition	3	
Geography	1	2	French language		1
Modern languages	2	2	History	1	
			History and geography		1
			Modern languages	3	
Total of literary instruction	12	12	Total	8	4
Mathematics	3	4	Applied mathematics	1	
Physics and chemistry	3	3	Arithmetic		1
			Applied physics and chemistry	1	
Natural sciences	1	1	Laboratory work		1
			Hygiene	1	
			Theoretical agriculture	1	
Total of scientific instruction	7	8	Total	4	2
Penmanship ¹	3		Penmanship ¹	2	
Drawing	4	4	Drawing	2	1
Singing	2	2	Singing	2	1
Gymnastics, ² military drill	2	2	Gymnastics ²		1
Manual training and agriculture	4	4	Manual training and agriculture	6	
Total	12	12	Total	10	3
General total	31	32		22	9
			General total	31	

¹ Writing lessons only for those students who do not write a good free hand. Hours not included.

² Lessons in gymnastics may be added during the recreation period.

CURRICULUM OF NORMAL SCHOOLS FOR WOMEN

SUBJECTS OF INSTRUCTION

First and second years	First year	Second year	Third year	General culture	Professional education
Psychology, ethics, applications	2	2	Ethics and education, Pedagogy, school administration	1	2
French language, literature, and composition	5	4	Literature, French composition	3	
History and civics	2	2	French language		1
Geography	1	2	History	1	
Modern languages	2	2	History and geography		1
			Modern languages	3	
Total	12	12	Total	8	4
Mathematics	2	2	Laboratory work		1
Physics and chemistry	2	2			
Natural sciences	1	1			
Total of scientific instruction	5	5	Total		1
Penmanship ¹	2		Penmanship ¹	2	
Drawing	4	4	Drawing	2	1
Singing	2	2	Singing and music	2	1
Gymnastics ²	2	2	Gymnastics ²		1
Total	8	8	Total	4	3
Sewing and mending	1	2	Domestic economy	1	
			Hygiene and medical aid	1	
			Sewing	3	
			Cooking	2	
			Washing and ironing	2	
			Cleaning and gardening	2	
			Total	11	8
General total	26	27	General total	23	8
				31	

¹ Writing lessons only for those students who do not write a good free hand. Hours not included.

² Lessons in gymnastics during recreation periods, one hour each year, with one hour in addition for the second and third year students together.

adapt its explanation to the necessities of elementary instruction, to put it within the reach of the children who hear it. This first kind of apprenticeship in the school will be served under the watchful eye of the normal school professor, expert in the subject at hand. He instantly may correct or criticise the lesson given by the *élève-maître*, call to notice its weak points, and if necessary, refashion it if poorly made,—a thing impossible in an actual class and in the presence of children, before whom their masters should under no consideration be humiliated. These typical lessons, which will lack nothing but their future hearers, will be what general rehearsals are in the theatrical world. In these the actors go upon the stage of an empty theater for the purpose of going thru or rehearsing their parts and so becoming skilled in playing them their very best on the approaching days of the public performance before the crowd of assembled spectators.

It is needless to emphasize the second point, which is not an innovation in the curriculum of our normal schools. For twenty-five years, in fact, instruction has been given in theoretical and practical pedagogy and the application of psychology and ethics to the art of education. (Psychology and ethics are studied in the first and second years.) In the new curriculum has been inserted all that concerns the material installation of schools, their organization and administration; also the history of pedagogy in its larger aspects, that is, the doctrines of the great educators, of those who have shaped anew the science and art of education. The director or directress of the normal school is the one who is intrusted with this part of the instruction and that fact is proof of the importance attached to it. They are recommended to be careful not to omit in their lectures any of the principal questions which deal with physical, intellectual, and moral education in the family and in the school. That they may pay particular attention above all to education in morality, they are urged and requested to give a certain number of hours to the exposition of brief lessons in ethics as is done in lower schools. Since the time when our secular and strictly non-sectarian schools were closed to the clergy of different faiths and even put without

the pale of all religious influence, the teaching of a human and rational system of ethics has assumed considerable importance and we cannot too greatly exert ourselves to equip our teachers for fulfilling this task, so delicate and so full of responsibility, in their work as educators. On this point they had been up to the present time very poorly prepared, and it is matter of moment that from the very beginning of their stay at the normal school they should learn what are the notions of morality that are suitable to children at different ages, and how the moral verities may be presented simply, clearly, and persuasively to childish understandings.

Let it be said, too, that in the teaching of pedagogy such as the recent curriculum conceives it, the master, or the director of the normal school, is not the only one that is called upon to take part. The pupils also will participate in the work. Each Thursday, a pedagogical lecture is to be given by a third-year student, under circumstances somewhat formal, for the whole body of the school, students and teachers, is expected to be present. Before this general meeting the student-lecturer will either give a lower-school lesson to children brought in to hear it, or he will discuss some point of method or discipline; he will furnish a criticism of this or that text-book; he will correct the pupils' prepared work; or possibly he may content himself with reading a page of pedagogy and explaining and commenting thereupon.

But of all training offered to the *élèves-maîtres* for their technical apprenticeship, assuredly the most important and the most profitable will be their actual participation in the instruction of the different classes in the practice schools connected with the normal schools, which practice schools differ in no respect from the other public schools except, possibly, that they are still better regulated. Of course before the time of the reform now being carried out, the *élèves-maîtres* were already connected with the work of the annex-school, but not closely enough, and under poor conditions. They were sent there in their first year of study. They did not spend enough time at the annex-school—a week at a time after a long interval and only once or twice a year. Moreover with the middle of the third

year, on the eve of their departure from the school, just when the period of probationary teaching would have been most helpful, they ceased all attendance at the practice school, since they were compelled to bury themselves in urgent preparation for the *brevet supérieur*. This system of intermittent attendance at the annex-school had, in addition, the disadvantage of breaking up and deteriorating the regular course of study during the several days that the *élèves-maîtres*, detained by other duties, were forced to be absent from the instruction at the normal school. Henceforth it will be only in the third year that the *élèves-maîtres* will test themselves in the schoolroom. They will each attend the practice school two months, either in succession or in two periods of a month each. This somewhat longer and more continuous participation in actual and effective teaching will permit them to become more thoroly acquainted with children and to become initiated *gradually* into the difficulties in the practice of education. At first they will take charge of only the simplest lessons, those which will best correspond with their own aptitude, and they will prepare these lessons at length and with the help of the director of the annex-school, whose special duty it is to oversee and pass upon their efforts and to guide them in their first gropings. Then they will be allowed a little more liberty and initiative. They themselves will choose and, as best they know how, will regulate the work of their classes to suit themselves; only, of course, they will receive, if they make mistakes, the observations and criticisms of the director of the school. At the end they will be left alone in close touch with the pupils, without the help of the director and hand to hand with the difficulties of discipline. In case the annex-school of a largely attended normal school should not contain enough classes to permit each of the normal school students to be trained there two months, public schools will be designated for a few weeks as the practice field and place for trial teaching.

Furthermore, let us add, the third year *élèves-maîtres*, if they are serving their apprenticeship in the annex-school, will nevertheless have opportunity to become acquainted with the other public schools. Several times a year, in groups and

under the direction of a normal school professor or of the director himself, they will be shown thru three typical schools of the neighborhood, namely, a school of three classes, a school of but one class, and a mixed school where both boys and girls are assembled. Thus they will become familiar with the general life of schools and with their different conditions, and will find themselves less like strangers in a strange land when they themselves shall take up their work. And on returning from these pedagogical visits, the professors and students will discuss the methods which they have seen in use, and whatever they have noticed that was faulty or praiseworthy in the methods employed. The benefit resulting from this will be not only to the *élèves-maîtres*, since the normal school professors will themselves obtain thereby the advantage of having seen at first hand how the teachings of the normal school are applied abroad or how they are modified.

We have said that the third year *élèves-maîtres* were henceforth rid of the burdensome care of preparing for the *brevet supérieur*, that is, for a general examination which covers all the subjects of instruction, since they will have undergone the test at the end of the second year. It has been thought best, however, to institute at the end of the period of study a final examination for a certificate of studies completed (*certificat de fin d'études*) which will give approval to the work accomplished in the third year. But this will be an examination purely pedagogical, which all the *élèves-maîtres* will pass without difficulty and without special preparation, provided they have not wasted their time. There will be required: *First*, a written composition, which will consist of a more or less extended development of a subject in pedagogy chosen by the student himself from a list which will be given him two months in advance. Thus the spirit of initiative in the student is encouraged. To him is left the liberty to choose whatever subject is to his liking and he is allowed all the leisure necessary to consider the question chosen and to treat it thoughtfully. *Second*, an oral lesson given to the pupils of the annex-school upon a subject in the elementary work. The candidate draws the question by lot. *Third*, he will finally be questioned upon

points of practical pedagogy, the organization of a class, school curricula, methods, and processes in instruction. These questions will have particular bearing upon the subject treated by the student in his written theme.

Thus the examination for the certificate of studies completed will help to direct the efforts of the students toward apprenticeship in the profession. To present himself for it with success the *élève-maître* will have only to perform regularly the different duties in the curriculum for the third year. The certificate which will be given him will, moreover, allow him very appreciable advantages. It is well known that, according to our legislation in force, men and women teachers begin their work as probationers in the schools to which they are appointed. They are not appointed permanently. They become the titular incumbents of their positions only if they have obtained after a certain period of work what we call the *certificat d'aptitude pédagogique* (certificate of pedagogical fitness) instituted by the decree of January 18, 1887. The examinations for this certificate comprise three series of tests; a composition written upon an elementary subject of instruction or of education; an oral test which consists of questions on points of pedagogy; finally, a practical test which consists of a recitation conducted in an elementary public school by the teachers on probation. Henceforth the *élèves-maîtres* who, on leaving the normal school, shall have obtained the certificate of studies completed, will be relieved of the written test and of the oral test for the certificate of pedagogical fitness. In order to have this last diploma conferred on them, all they will have to undergo will be the practical test, that is, in their own class of probationers they will have to give final proof of their professional capacity before a jury composed of inspectors of the elementary schools.

General culture—Altho much care has been taken to regulate the work of the third year so as to make of it in truth a year of professional preparation, yet no thought has been held of excluding from it all general culture. Five hours a week of recitation will be devoted to this. But the professor will employ as little as possible didactic exposition or lessons *ex cathedra*. He will especially have recourse to readings in

literature, history, and ethics, all suited to enlighten the students upon the great questions with which the present times and the life of humanity are particularly concerned. The office of the French pedagog has been peculiarly enlarged in recent days. His mission no longer consists simply in teaching the A B C's or the three R's, as you say in America. He has to become more and more an educator to whom is foreign nothing of that which concerns the social life of a democratic country, to the end that he may be ready to prepare French children, whatever their age, to become free citizens and men of the times. No longer can he remain indifferent to the things of art. He is briefly taught its history and care will be taken to show him, by means of reproductions, the masterpieces of architecture, of sculpture, and of painting. In addition, arrangements will, of course, be made for him to hear the finest musical compositions.

All the time not taken up with work under professors and with practical teaching will be reserved for the individual work of the student,—some fifteen hours a week of study. And it is understood that the student will direct this work himself. He will be allowed to devote himself to the study for which he has a particular taste. He will be permitted to choose for French composition those subjects which he prefers to write upon. The essential thing is, in fact, not the acquisition of a complete knowledge, which is, furthermore, impossible of conception, but the development of the habit of private study. This habit the instructor must continue throughout his lifetime, if he wishes to remain at the top of his profession.

Female teachers—The new curriculum, which from this year forth is applied in our normal schools, is a uniform system, common to the normal school for girls and to that for boys.

We in France are not yet converted to coeducation and probably never shall be, in spite of the fact that at the last congress of the Associations of Teachers,—those societies recently founded which we call the *Amicales*,—a formal resolution was adopted to that effect. But at least we have rallied to the support

of *co-instruction*. I mean by this that principle which, under certain reservation, admits equality in the rights of the two sexes in regard to instruction. Tho separated and isolated in distinct quarters, our men and women students in the normal schools receive, none the less, very nearly the same instruction. Between the curriculum of the normal school for men teachers and that of the normal school for women, there are scarcely any other differences than those resulting from the peculiar mission of woman and her family or social duties. That, in fact, was the thought that guided your great apostle of co-education, the noble and illustrious Horace Mann, when, in the mixed normal schools of Massachusetts and in his college at Antioch, he proposed for young girls an education *equal to* but not *identical with* that for young men.

First must be taken into account the physical constitution of woman and the necessity of economizing her strength. That is why she is allowed, at least in winter, a half hour more of sleep,—that is, eight and one-half hours instead of eight. A somewhat smaller number of lessons and exercises is placed upon her, particularly in the first and second years, namely, twenty-six and twenty-seven hours a week instead of thirty-one and thirty-two for the boys.

But especial consideration must be given the fact that the future teachers of our little girls have need of a theoretical knowledge and practical skill which becomes them only. So in the first two years they will be taught a little less mathematical science, two hours, instead of three, and likewise of physics and chemistry, two hours instead of three. But it is especially in the third year that the curriculum for the girls and that for the boys are differentiated, and that an important place is made for the *feminine* or domestic education. While the boys study logic and theoretical culture and apply themselves to manual work in iron and wood, the girls, the future women teachers, are trained in the tasks of their sex,—sewing, cooking, washing and ironing, the cleaning of objects and of clothing. They are taught not political economy but domestic economy,—all that should be known about good housekeeping and about assuring the comfort of a family. In the study of

hygiene, which befits them no less than the men, particular emphasis is placed on the precepts relative to child-hygiene and the attention to be given the sick. While awaiting the coming of the physician, it is well that they should be capable of discerning symptoms and preventing contagion; that they should have learned by what precautions the propagation of epidemic diseases may be avoided and the mortality of infants lessened. The curriculum of instruction in drawing is likewise fitted to the special aptitude of woman. While the boys are to be kept at the study of the imitative design, of geometrical drawing, and of modeling, the girls will draw plants from nature and will devote themselves to ornamental composition and decorative art to which they bring a remarkable taste for elegance and distinction.

Our normal school thus organized, in which the students will at the same time learn what they are to teach and the way to teach it, and thus animated with new life, will meet, we have reason to hope, the needs of our popular education. At any rate, they will escape the reproach which your eminent psychologist, Dr. Stanley Hall, addressed to some of the normal schools of America when he said that they are "not only wooden but petrified."² Everything is now arranged in our land to quicken among the *élèves-maîtres* the spirit of education. Possibly sufficient place has not yet been made for the history of pedagogy, of which Dr. Stanley Hall says correctly that it is "the heart of professional teacher training." Possibly, too, the natural sciences have been neglected too much because of forgetting that most of the instructors are called to teach in villages and will live in the midst of fields. But, on the other hand, nothing has been omitted that may open up the mind of the instructor to the aspirations of modern social life, and nothing, either, of that which is to develop in advance his professional skill.

The normal schools are the corner stone of our scholastic edifice. Guizot said in 1833, "Elementary instruction is entirely in the normal schools," and Jules Ferry forty years later said likewise, "There is no such thing as public instruc-

² *The psychology of adolescence*, Vol. II., p. 495.

tion without normal schools." Nevertheless they have their enemies and there has been vague rumor of dispensing with them.

To assure the success of men in any profession, and especially in one so delicate and so difficult as the art of teaching and rearing children, these men must be supplied with special and distinct professional schools. A member of the Chamber of Deputies, not taking sufficiently into account this truth long since recognized, proposed the past year, in his report on the Budget for public instruction, to require henceforth the preparation of teachers either in our Lycées for boys and in those for girls, or in our *écoles primaires supérieures*, our high schools.

That is nearly what the retrograde parties in the United States demanded in 1840, when they fought the reform plans of your great Horace Mann and opposed the creation of the three normal schools of Massachusetts under the pretext that the academies and high schools were entirely sufficient to assure the production of schoolmasters. This campaign of reaction happily met with no success in New England. No more would it in France if it were undertaken here, and the French normal school will be maintained for the greatest good of our one hundred thousand schools, to which they will continue each year to supply two or three thousand men and women teachers always capable of constantly raising just a little higher the level of popular education.

GABRIEL COMPAYRÉ

PARIS, FRANCE

IV

AMERICAN UNIVERSITY TRAINING¹

IMPRESSIONS AND OBSERVATIONS

In recording some of the observations made during a period of service as instructor in German at one of the leading universities of the United States, I am actuated by the belief that the conception which prevails in Germany of the American university—as of most things American—is in many respects erroneous.

As a matter of course we cannot expect to find in American civilization that matureness and balance which the tradition of centuries makes possible in ours. With all our progressive development we are in a state of inertness, while the life of the American people is characterized by a striking mobility and unrest. We are endeavoring to adjust the inequalities which history has produced in our civilization. The Americans—let us not deceive ourselves in this matter—are engaged in resolving their original equality into manifold inequalities. This movement is characterized by restlessness, even by nervousness; for the American people is by no means so youthful as some, on both sides of the water, would have us believe. It is composed of the children of old Europe and has brought about conditions of life which, in finesse and complexity, yield naught to those of European countries—conditions that demand for the attainment of practical, enduring success the ceaseless exertion of every power, physical and intellectual. This necessity for persistent and unremitting toil, often marked by fitful changes, on the part of each individual has resulted in America's already distancing us in the march of external progress. The purely practical tendency of

¹ Translated by Professor William A. Hervey of Columbia University.
[Supplement to *Allgemeine Zeitung*, 1905, No. 172 (July 28), p. 185-189.]

her efforts has until now, however, stunted the growth of a more deeply rooted, more genuine, culture.

This defect has probably been inevitable. There has simply been no time for reflection and composure. It is well, perhaps, that an industrial and commercial state of enormous wealth has been created, on the mighty foundations of which a comprehensive culture, inherently and intellectually strong, will yet proudly rise. This thought sometimes came to me, once with particular force as I stood on the mighty dome of the Columbia University Library in the city of New York; at my feet the seething metropolis, reaching into the distance and lost in the misty horizon. But other impressions smothered this hope. A short time before leaving the scene of my labors, a place of great natural beauty, I sat one evening at dusk on the precipitous bank of a lonely little lake. The trees and fields, the sand and rocks were weirdly mirrored in the dark water, over which the swallows darted, leaving a momentary reflection on the gently rippling surface. And then, with a feeling of regret, I realized how little of what there is in life was mirrored in the souls of those who worked amid these beautiful surroundings, how little they appropriated and assimilated for their inner life. About me, rotting on the ground, I saw trees that had been cleft by the lightning and shattered by the tempest, and sadly I thought of the noble wood that lay decaying and useless—because there was none to care for it.

It is the office of a country's educational institutions, excepting the technical schools, which of course aim at purely practical ends, to oppose to that inevitable externalization of life which is coincident with modern progress an ennobling ideality, a development of the intellectual, the spiritual. This office, I believe, the American universities do not perform. The average American student goes to the university in order that he may secure the best possible position in the shortest possible time. Most universities are content to help their students to attain this practical end.

The great majority of American universities are not universities in the German sense of the word. The study of the

American student stops about where that of our students begins. Since I confine myself to my personal experience, I am speaking here only of the studies pursued under the faculties of philosophy. The student of an American university who graduates after a four-year course has learned about as much as the graduate of a *Gymnasium*, a *Realgymnasium*, or an *Ober-realschule*—perhaps somewhat more. That is to say, he has acquired a general, but as yet superficial, education. While the German *Abiturient*² begins at this point his scientific training, which leads him to independent investigation and production, the American student usually ends his preparation and goes out into life. Only a very small percentage of the large number of students pursue their studies further—and this often abroad—along special lines.

From what has been said it is clear that the American university is in no wise to be compared with our university, but corresponds rather to our so-called "upper schools." Furthermore, that only the courses for graduates, which, however, are seldom found,—practically at only a few universities—are to be considered an equivalent of our university work. This inferior position of the American university as compared with ours is due to the relatively recent development of the American educational system. This condition seems to satisfy the practical demand of everyday life, since life can take its course even without the thoro and independent scientific training of a select class, and since the practical tendency of the work in applied science at American universities entirely fulfills its purpose. Inasmuch, however, as ever and anon voices are heard among us that claim to see in American views of life and in the American university system an ideal worthy of imitation, it does not seem out of place to point out the defects of the same.

In contrast with the German method, which confines its aim to training the student for independent, scholarly investigation, the Americans are fond of boasting that their university training makes for the student's individuality. And we

² *Abiturient*, a candidate for the final examination of the *Gymnasium*, i. e., for the *testimonium maturitatis*, which admits him to the university.—TR.

in Germany are inclined to regard this development of individuality as the peculiar superiority of the American people. Just as one likes so well to talk heedlessly of the strenuous joys of war, just so does one construct his ideal of the happy, free American, strong of personality, energetic and aggressive, loving the struggle for existence for the struggle's sake, bowing his republican neck before no royal dignitary, proclaiming enthusiastically the rights of the individual. If this were so, if this modern ideal of individuality asserted itself more powerfully in America than in Germany, it would surely be found most strikingly expressed in those of most intelligence, that is, at the universities. But it is precisely this tendency that I have failed to observe. Not as characteristic and general, but only in widely isolated cases, have I found the American student actuated by the pursuit of high ideals, or exerting himself independently and individually beyond the most immediate demands of the instruction, of the tasks assigned him.

The plan of instruction for undergraduates, that is, for most of the students, aims simply to give them general knowledge, or rather information, of great variety, but of limited scope and depth. An easy, superficial undertaking for students and professors alike. Indeed, the professor or instructor teaches only beginners, because in the course of four years the students frequently take up new subjects. The work of students and professors in undergraduate classes takes time and physical effort, but it is impersonal, unsystematic, unproductive. My judgment may seem harsh, but it is unbiased and is based upon what is actually done, not upon the printed curriculum, with its dazzling array of subjects and courses. The program of lectures reads very well, but it is only the elements of the subjects provided for that are actually treated. The study of modern languages and literatures seems to me to be suffering most conspicuously. Philological work, in our sense of the word, is of course not done. And this omission is not harmful. On the contrary, it is to be regarded as an unfortunate concession to the German practice, to require, for instance, that a student shall have taken Gothic or Old High German for a term before being able to graduate. To make such a

demand of a student who is going to leave the university at once and begin teaching, is all wrong. I am of the opinion that the organic structure of the living language can be understood without extensive training in philology and historical grammar. Our linguistic studies suffer unquestionably thru the one-sided and excessive emphasis placed on philological training, which too often involves the student in a maze of details from which he does not emerge and which come to be regarded as an end rather than a means. The sound American tendency discards this historical scientific method for the great majority of students, restricting it very properly to the specialist. There is a considerable number of American professors who hold the opinion, and who have expressed it in no uncertain terms, that the literary and philological scholarship of Germany has been a great obstacle to the dissemination of the best and truest literary culture in America. These objections are well-founded, proving as they do, that a great gap exists between the cultural problems of Germany and those of America, a gap which makes possible reciprocal appropriation and imitation in a limited degree only. When discussing the question among my friends in America, as to whether the German university should serve as a model for the American, our opinion always was that such imitation would signify no improvement for the latter. I emphasize this conviction of Americans, which rests in part on a national sense of independence, as against the sickly, exaggerated hopes of international fusion which, particularly in Germany, are finding expression in fantastic conceptions. Any one who has had an opportunity of living for a considerable time in various countries, who, as student and teacher in several foreign universities, has become acquainted with the most cultured and unprejudiced elements of the population, such a one learns how infinitely valuable a homogeneous nationality is, both for international culture and for the preservation of international peace. All the fine phrases about equality cannot obliterate the fact that only thru universal inequality, thru the development and operation of each entity, of each phenomenon, according to its own peculiar laws and needs, has culture progressed. Only

those who are absolutely free and independent, deriving their most characteristic strength from their own inmost self—only such, be they individuals or nations, can become friends and allies. The American, it is true, does not cherish this feeling in wholly unadulterated form. It has in his case become a strong, national self-consciousness that is, perhaps, occasionally manifested in overweening pride and is not always free from chauvinism.

Instinctively as the American avoids or combats the grafting of our system on his, he has hitherto been unable to replace it with anything better. The study of foreign languages and literatures in America at the present time leads neither to an approximate mastery of the spoken or written idiom, nor does it effect even a moderately satisfactory acquaintance with the literature. It is without appreciable influence upon either the intellectual or the personal development of the student—with allowance, of course, for the inevitable exceptions. Most students, however, for various reasons, get no further than the elements. I once asked a second-year student who had taken German with me for a year, and with very good results, what course in the German language and literature he would elect the next term. "I have done enough German," he answered; "I have laid the foundation for German and now I will begin Spanish." He did not know the meaning of study; that it demands perseverance, that this half-way mastery, this dissipation of energy and abandonment almost at the beginning, are opposed to any genuine study such as develops to the full measure personality and individuality.

Equally superficial and lacking in individuality is the study of literature. Lectures are infrequent, are restricted to the older students, and are often badly arranged. The work is concentrated on reading of texts in the classroom. Translation plays the principal part, at any rate occupies most of the time. Examination of the ethical content or literary character of the works, discussion of the author's personality—these are practically almost illusory aims. Save in cases so few as to be negligible the students read no other books of a literary character but those prescribed for class-work. This lack of

private reading is one of the worst evils of any study. It reacts seriously on the development of character, it leads to self-deception, to naïve dishonesty. I was dumfounded at the cool assurance with which many students spoke of things of which they knew nothing, with what presumption they pronounced critical and æsthetic estimates of works and authors that they did not understand. I was no less amazed at the satisfaction which they often manifested with themselves and at their contentment with their intellectual dearth. In them was manifest the deadly power of the soporific phrase.

By way of compensation there is much worthless reading matter perused in America. No land in the world is so richly provided with meretricious light reading, and the deteriorating influence of these utterly worthless publications extends even to the scientific field. As long as the mass of the intelligent American population prefer the most vapid novels and monthly magazines to a good book, so long will the intellectual culture of America make no advance. The method of university instruction does little to improve the deplorable condition that now exists, or has at least no appreciable influence. This may seem a harsh judgment, but it is the outcome of my practical experience. And one of the most respected American university professors, who unceasingly lifts his voice for a culture that leaves a genuine personal stamp, in place of that mere veneer that makes for "smartness," confirms my judgment *in toto* when he writes: "Speaking from my own long experience I do not think that one out of twenty university students, even of those who elect courses in English literature, has read and assimilated the works of any one good author, or any single work."

Who is to blame for the conditions that make possible this sweeping verdict? The students alone? Certainly not. They do not know any better. They see about them nothing that might incite them to penetrate the depths and beauties of literature and art. The man who lives a spiritual life does not show it; the voice of the agitator for better things is drowned in the tumult of other interests; the man who works quietly and secretly for his ideal is overlooked or mis-

understood. The student who works merely to get a profession sees others about him living with an eye only to externals, to the attainment of success. Success, triumph over competitors, is the motive for exerting his powers—even in play. The reason why athletic games in America, and especially at American universities, have increased to such a menacing degree is to be sought in the fact that they appeal in the broadest sense to the more brutal of human instincts. To play football as the American student of today plays it, is to strive by the most violent means for victory over the opposing side and is brutalizing, not only to the body, but also to the mind. No less brutal is the indescribable enthusiasm with which spectators of both sexes, to the boundless amazement of the European, watch these contests.

Sport—incredible as it sounds—is today the dominating feature of the American university. Not the student who achieves most in scholastic work is most known and lauded, but the best football player or the captain of the crew. Not the gray-haired professor who has devoted his whole life to the cause of education is honored, but the coach of the football team, of the crew, that is, the trainers who drill the players or rowers to the highest degree of efficiency, who keep them in winning form and make them feared for their prowess, so that they may wrest victory from rival universities; these are the persons who achieve popularity and fame. The coaches are the real celebrities of the universities. The greatest events of the university are the big games; the most important fund is the athletic fund. Students who pursue these and other extraneous matters with feverish interest and themselves participate, cannot build character thru study, cannot deepen their mentality.

The professors, however, are not wholly blameless. Not that the American professor, as such, may be considered unequal to his task. On the contrary, the task is too easy for him. It is not difficult enough to encourage his progress, to promote his higher development. Nothing is easier than to give instruction to undergraduate students. It is all so simple, so elementary; the texts used are all so conveniently provided

with explanatory notes. The students are so unexacting, generally so satisfactorily prepared; if not, they are given a bad mark. Really, it is too simple. Personal effort on the instructor's part is not demanded. A man highly esteemed in the United States, well known, too, in Germany, a professor, university president, and diplomat, a man of undoubted prominence and high repute, in his lately published autobiography, in discussing his university activity, his aims and ideals, makes express mention of the fact that he worked more than his students. Such a fact, emphasized as it is with such stress, seems, accordingly, to be an exception. And indeed, in answer to my wondering question, I received a reply that confirmed my supposition. At many of the smaller universities, in particular, I was told, the view is said to prevail that a professor who continues to study may incur the suspicion of being deficient in preparation for his calling.

I would not be misunderstood. I do not estimate the worth of a university teacher by the number of his learned publications, but merely by the personal force that results from his activity as scholar and teacher. The scholar absorbed in the most difficult special investigation is not to be preferred to the teacher, whose scholarship may be less profound, but who works and inspires thru his personality. The preponderant activity of the American university teacher lies in teaching, in practical instruction. Only the quality of this practical instruction is today, in general, unsatisfactory. It is the indisputable merit of German university instruction that, by virtue of its scrupulous conscientiousness and thoroness, it inculcates in the student standards of honesty and truth and thereby lays an indispensable foundation for personal, individual achievement. The American university, which dispenses with this foundation, should regard it as a duty to make good this loss by taking advantage of the ethical content which may be derived from the study of literature, history, etc. That this opportunity for compensation has not been embraced, is due to the teaching staff; not so much to its individual members as to the organization of the profession, the traditional method of the teacher's preparatory and supplementary training, finally to

the lack of definite curricula plainly laid down, to the absence of higher demands. An improvement is probably not to be looked for very speedily, because, as already stated, the results aimed at, in view of the conditions described, seem for the time being to satisfy the practical needs of the nation.

Impressions of so general a character as I have recorded may easily seem one-sided, the conclusions may seem unjust, the more since, with few exceptions, I have refrained from illustrations or proofs. I would express the hope, however, that my presentation may be understood as it is intended, namely, as an endeavor to establish the truth on the basis of my own observation. Palliation and misrepresentation profit no one. The presentation of actual conditions is alone justifiable and productive of good. It is precisely the actual conditions, however, that one does not always find presented; these are passed over in silence. What first appears striking to the observer, particularly to the observer from abroad, is the exceptional, the exceptionally good or the exceptionally bad. Impressions derived from exceptions are always one-sided and unjust. Impressions, on the other hand, that were acquired in the course of service, in the petty daily routine; impressions that were daily increased, renewed, modified; impressions that the recipient sought to assimilate by ceaseless reflection,—such impressions, even tho personal, I may speak of as corresponding to the actual conditions. In judging achievements that result from a sum-total of effort, be it material or intellectual, the average must always be applied as the standard of estimate. The cultural condition of a people is measured by the individual average; so, too, must the significance of educational institutions be measured by the conditions applicable to the general run of their students, and it is these alone that have been characterized in the foregoing impressions.

Still another factor is to be considered in judging of these impressions. General facts and incidents which are seemingly of a very gratifying character lose their rosy generality when measured by ideal demands. The American nation, for example, is credited with an extraordinary interest in culture,

a marked intellectual vivacity, a willingness to enter into the discussion of modern educational problems. This is in part correct. When it is a question of making education and knowledge accessible to the masses, the effort, both public and private, is indefatigable and is productive of results. The credit of carrying out educational projects on a large scale cannot be denied the people of the United States. The management of the great museums of art and ethnology is of model excellence; well worthy of imitation is the extremely practical arrangement of the libraries, which facilitate in every way the use of the treasures there collected, because the scientific office of the library is subordinated to its practical usefulness.

But this delight of the masses in educational opportunities and the support which it receives, reminds one somewhat—apart from the religious, or rather ecclesiastical, factor which often plays a part—of the Age of Enlightenment in the eighteenth century; it involves the danger of shallowness, of social vapidness, of a half-understood phraseology. This, perhaps, is unavoidable; the greater extension involves, by a fatal necessity, the lesser depth. Nor is that so bad; for it suffices if one knows well his profession, his trade, his work, and then besides, as dilettante, incidentally seeks mental nutriment by way of recreation. But for the universities, for the places in which the future intellectual leaders of the nation are trained, those who are to be the teachers of others, there this principle of cultural expansion should find no tolerance. For the student this superficial occupation with all sorts of things worth knowing is harmful. It always used to surprise me to hear that this or that American girl had studied Greek, Latin, German, French, mathematics, history, natural science, astronomy, sociology, biology, philosophy, psychology, and medicine; that she painted, sang, went into society, danced, did calisthenics, played tennis, rowed; now I know that she does not keep much of all this,—at best the merry talk of her flirtations.

The task of the university lies not in the dissemination of culture, but in the deepening of it.

In America and in Germany people are smiling over the exchange of professors. And rightly. A non-official exchange

already existed before the announcement of the proposed systematic arrangement. From Germany to America there went probably more teachers than students, in the other direction more students. There was no occasion to regulate the informal exchange, which has done much good on both sides of the water. Official exaggeration of friendly relations only injures the good cause. The nations are approaching each other without diplomatic aid. Under some circumstances the wishes of the government may exert an unwholesome influence upon the impartial judgment of those who hesitate to dissent. It was not until our suit at Washington was being so strongly pressed that Professor Münsterberg of Harvard University, a German, wrote his *America and the Americans*, a book that displays astounding and inexcusable bias.

Who is to profit by the exchange? The two nations, in the strengthening of friendly relations, which a single serious commercial conflict would instantly destroy? Surely not the respective universities. Only a minutely small number of American university professors would be able to lecture to German students or to conduct seminars with them on lines similar to those followed by German professors. Only to a negligible fraction of American students could the German professors give instruction such as they are wont to give at home. Exchange for the sake of exchange is nonsensical; if for the sake of political relations, it is not an affair of the universities. The interests of science are not promoted. It is not the business of professors to "migrate"; this is, as of yore, the valued privilege of the student. The learner sets out for the place to which he is attracted, to the teacher to whom he would listen. If pleased with place and teacher, he stays there and effects an inner contact with the spirit that pervades things. And this should be so. The university is not to be an aggregation of instructors, of whom one teaches this science, another that. The departure of a professor should leave a gap which can be filled only with difficulty, a gap which should not be allowed to exist, even for a short time, by reason of an unjustified mission to foreign parts. Thru the tradition which it keeps alive, thru the professors identified with it, a

university must embody a well-defined spirit which gives it a pervading atmosphere. So it needs must be, in Germany and America alike, and therefore a regular and systematic exchange, involving a continual coming and going, should be avoided.

The question of expense should not be ignored. Both German and American universities would have to make considerable disbursements, which would naturally go primarily to the older professors of name and fame—for the whole plan is after all, at bottom, a species of exhibition. This money, however, could be applied much better, in the form of stipends or allowances for foreign travel, to students for scientific purposes. These and other objections may be urged against the exchange of professors. The plan, moreover, will scarcely find permanent, practical adoption, so it is probably not worth while to dwell on it any longer. That a systematic exchange, in view of the different plans and aims of German and American university instruction, is without inherent justification, will hardly be a matter of doubt.

We have no reason to underestimate the American university and to exalt unduly our own by contrast. American education is as yet in a state of transition; it is still making tests and experiments. The American university is taking its place among the forces which have as their aim, to give the people access to the possibilities that make for the development and for the mastery of life. The aims of the American university are preponderatingly practical. Not only by reason of their organization do these universities have a place in modern life. The fact that they are identified with the life about them determines their character and the service which they perform, their defects and weaknesses.

As an admonition and a warning, on the other hand, comes to our ears ever and anon the question: What is the status of our German universities with respect to our modern life? Is our science fruitful for our civilization? Are our professors the leaders of the nation? Are our students the flower of our youth? These are hard questions and I do not know whether an American, coming over to Germany and writing down his impressions of us as I have written mine—I do not

know whether he might not record much with surprise, whether he might not find many a point of indictment. When I consider it aright, the brutal football game, for example, which I condemn so harshly, this game with all its attendant evils, is not a whit worse than the discreditable excesses of the *Comment*³ and the drinking-code, than the disgraceful duels and brawls. The very unconventional bearing of American students contrasts almost favorably with the stiff formality of certain German student-circles, with the ridiculous disputes about questions of rank and precedence which are constantly occurring. Nor are there, so far as I know, any sectarian fraternities in America.

WALTHER KÜCHLER

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³ *Comment*, the code of student customs at German universities.—TR.

V

FRESHMAN ENGLISH (I)

I A STATISTICAL SURVEY OF PROPORTIONS

This paper compiles the statistics furnished by forty-four colleges in reply to a circular letter dated October 20, 1905. A second paper will make a comparative study of ideas and methods.

(I) THE UNIT

The unit in the following tables is one hour per week per year. To secure the necessary uniformity, courses running for part of a year are computed in terms of the whole year; *e. g.*, a course of three hours a week for a half-year is entered as one and a half hours. Parallel courses such as the Two-Course Type below are entered in either of two ways: if both courses are required, or are largely elected by freshmen, the number entered indicates the sum of the two; if only one course is largely elected by freshmen, the number entered indicates the hours in that course alone. This method is only an approximation; but so is the whole computation by hours. A computation by "points" toward the B. A. degree would be more exact, if that unit could be applied to a sufficiently large number of colleges; but there is no probability of its indicating generally different proportions. Scientific exactness being in this matter unattainable, the results of careful estimate by hours may be accepted as indicating proportions about as accurately as is possible.

(2) THE AREA

The forty-four colleges enumerated include practically all types and conditions, and seem fairly to cover the area north of the Ohio and Arkansas rivers. The South is excluded from any general computation of averages by its special con-

ditions, and so are all schools of technology. On the other hand, no reason appears from the returns for the isolation of colleges for women.

(3) THE TERMS

The terms *literature* and *composition*, tho they are neither sharp nor mutually exclusive, convey a meaning to teachers in both school and college that is definite enough for the present purpose. By *composition* is meant the whole study of rhetoric; *i. e.*, both the theory and the practice of writing and speaking in the vernacular, with such study of masterpieces as is immediately applied to that theory and that practice. By *literature* is meant the study of vernacular classics to direct and heighten æsthetic appreciation and to trace the development of racial expression in its typical forms, periods, and authors, without immediate application to the development of expression in the student himself. Both deal at times with the same material, but in different ways directed to different ends. They are naturally correlative; but as subjects of teaching they are practically distinct. This is the common use of the terms by teachers; and this is the use here.

(4) GENERAL AVERAGE

The colleges generally require freshman English for a first degree. The gross total of hours for this course is 143 1-2; for literature, 52; for composition, 91 1-2. That is, a composite freshman course in English would give three hours a week in about the proportion of one hour of literature to two hours of composition.

(5) TYPES

Twenty-seven freshman courses focus on composition; seven focus on literature; ten give equal attention to both. Analysis for more definite agreements in aim and method reveals three types and a fourth group (the Literature Type) which, tho less distinct, has common traits of some significance.

Composition Type A

(Brown, Colorado College, Knox, Rochester, Trinity, Wellesley, Wesleyan, Williams, and the Universities of Colorado, Iowa, Michigan, Missouri, New York, North Dakota, Ohio,¹ and Vermont.)

Courses of this type are devoted entirely to composition. Tho there is more or less analysis of masterpieces for the exemplification of rhetorical theory and for models in actual writing, the study of literature as literature is relegated to later courses. The aim is single—technical mastery of construction and expression. The method depends mainly on frequent themes, with criticism in class and in office consultations, and more or less discussion of theory. The relation to other college courses in general is that of the discipline of expression to the discipline of acquisition. The relation to other courses in English is that of practical grasp of form to literary appreciation of form. The relation to school work in composition varies. In some colleges there is apparently a substantial repetition of much that is supposed to be required for entrance; in others, there is a definite advance. And at any given college there is usually a marked difference in proficiency among the members of any given freshman class. To meet this, Iowa, Ohio, Michigan, and Wellesley put the best students into separate sections for advanced work.

Composition Type B

(Amherst, Baltimore, Bowdoin, California, Dartmouth, Hobart, Huron, S. D., Mt. Holyoke, Vassar.)

In effect this is a sub-type of A. It has much the same general aims and methods. The main difference is a more definite adjustment to later courses in literature thru a larger use of literary models than is directly applicable to the students' writing. Thus there is a certain proportion of literature, in the average about one-third. Baltimore divides the time equally. California, presenting literature and composition

¹ Ohio has two courses open to freshmen, as in the *Two-Course Type* below; but the course in literature is more commonly taken later.

equally and concurrently, aims to make each react directly on the other.

Literature Type

(Columbia, the College of the City of New York, Princeton, Rutgers, Yale.)

This can be called a type only by stretching the term; for it expresses no single method or relation, only a single aim. But it includes conveniently those few freshman courses, otherwise quite various, which are alike in being devoted mainly to literature. Columbia, whose policy is most definite, accepts the entrance requirements in composition as actually achieved. The consequent idea of the freshman course is a broader outlook on literature, mainly by historical survey, and a freer and less perfunctory habit of composition by frequent essays on the books and the literary aspects thus presented. Specific courses in composition are resumed in sophomore year. At Princeton, training in composition is given, not in any course, but by the preceptors thru the essays required in all "reading" courses, and consequently in freshman literature. At Rutgers, essays are somewhat similarly incidental thru the four years, and are criticised by a faculty committee appointed by the president. The freshman course is devoted to literature. Rutgers also offers instruction in oratory and debate. At Yale, the first course in composition is given in sophomore year as one hour of a three-hour course in English. Freshman year is devoted entirely to developing intelligent and appreciative reading by study, first, of Shakspeare, secondly, of selected nineteenth-century prose and verse.

Two-course Type

(Beloit, Bryn Mawr, Chicago, Cincinnati, Cornell, Harvard, Haverford, Illinois, Kansas, Leland Stanford, Northwestern, Pennsylvania, Swarthmore.)

In this type are included colleges in which (1) two separate courses, one in literature, the other in composition, are open to freshmen; and (2) *both* these courses are largely elected by freshmen. In other words, these colleges actually teach

both subjects to a large proportion of their freshmen. At Byrn Mawr and Haverford both courses are required in freshman year; in a few other colleges both are so freely elective as to be open to any year; but in general the composition is either required of freshmen or in some other way made the major course, and the literature is open to any year or in some other way made the minor course. In general, that is, this type commonly makes composition a prescription for freshmen, and literature an opportunity; but the freshmen, on their part, commonly pursue both. The latter characteristic excludes from the type Ohio, which offers the two courses indeed, but has only one-fourth of its freshmen in literature, and Minnesota, where the two courses are alternative. It correspondingly includes Chicago, where the two courses are not parallel, but consecutive in the same year.

(6) DISTRIBUTION OF TYPES

A division into larger colleges and smaller colleges, tho it is too arbitrary for permanent significance, indicates some interesting proportions.

TABLE I. TEN LARGER COLLEGES

	Lit.	Comp.	Total	Type	Summary
California	$1\frac{1}{2}$	$1\frac{1}{2}$	3	Compos. B.	
Chicago	$1\frac{1}{2}$	$1\frac{1}{2}$	3	2 Course	
Columbia	2	1	3	Literature	2 Course Type, 5 ;
Cornell	2	3	5	2 Course	Literature Type, 3 ;
Harvard	$1\frac{1}{2}$	3	$4\frac{1}{2}$	2 Course	Composition Type A, 1 ; Compo-
Illinois	4	3	7	2 Course	sition Type B, 1 ;
Michigan	0	3	3	Compos. A.	average proportions of literature
Pennsylvania	$1\frac{1}{2}$	$1\frac{1}{2}$	3	2 Course	and composition, about equal.
Princeton	$2\frac{1}{2}$	$\frac{1}{2}$	3	Literature	
Yale	3	0	3	Literature	
	$19\frac{1}{2}$	18	$37\frac{1}{2}$		

TABLE II. THIRTY-FOUR SMALLER COLLEGES

Since this group is miscellaneous, and the figures for the individual colleges appear in other tables below, it is sufficient here to give the summary. The gross total of hours is 105 ; for literature, $31\frac{1}{2}$; for composition, $73\frac{1}{2}$. The proportion, therefore, of literature to composition is about 1 : $2\frac{1}{2}$. The proportion of types is: Composition A, 15 ; Composition B, 8 ; 2 Course, 9 ; Literature, 2.

More definite significances appear from a geographical division.

TABLE III. NEW ENGLAND

	Lit.	Comp.	Total	Type	Summary
Amherst	1	2	3	Comp. B	
Bowdoin	1	$2\frac{1}{2}$	$3\frac{1}{2}$	Comp. B	
Brown	0	3	3	Comp. A	
Dartmouth	1	2	3	Comp. B	Composition Type A, 6 ;
Harvard	$1\frac{1}{2}$	3	$4\frac{1}{2}$	2 Course	Composition Type B, 4 ;
Mt. Holyoke	$\frac{1}{2}$	$1\frac{1}{2}$	2	Comp. B	Literature Type, 1 ;
Trinity	0	3	3	Comp. A	2 Course Type, 1 ;
Vermont	0	2	2	Comp. A	average proportion of literature
Wellesley	0	2	2	Comp. A	to composition, about 1 : 3 ;
Wesleyan	0	2	2	Comp. A	without Yale, about 1:5.
Williams	0	2	2	Comp. A	
Yale	3	0	3	Liter.	
	8	25	33		

The significant fact here is the great preponderance of the composition types and, in general, of the hours devoted to composition.

TABLE IV. MIDDLE STATES

	Lit.	Comp.	Total	Type	Summary
Baltimore (Women)	2	2	4	Comp. B	
Bryn Mawr	$2\frac{1}{2}$	$2\frac{1}{2}$	5	2 Course	
Columbia	2	1	3	Liter.	
Cornell	2	3	5	2 Course	
Haverford	$1\frac{1}{2}$	$1\frac{1}{2}$	3	2 Course	Literature Type, 4 ;
Hobart	$\frac{1}{2}$	$2\frac{1}{2}$	3	Comp. B	2 Course Type, 5 ;
N. Y. (City College)	2	0	2	Liter.	Composition Type B, 3 ;
N. Y. (University)	0	$2\frac{1}{2}$	$2\frac{1}{2}$	Comp. A	Composition Type A, 2 ;
Pennsylvania	$1\frac{1}{2}$	$1\frac{1}{2}$	3	2 Course	average proportions of
Princeton	$2\frac{1}{2}$	$\frac{1}{2}$	3	Liter.	literature and composi-
Rochester	0	2	2	Comp. A	tion, about equal.
Rutgers	2	1	3	Liter.	
Swarthmore	3	$1\frac{1}{2}$	$4\frac{1}{2}$	2 Course	
Vassar	1	2	3	Comp. B	
	$22\frac{1}{2}$	$23\frac{1}{2}$	46		

TABLE V. STATE UNIVERSITIES (MAINLY MIDDLE WEST)

	Lit.	Comp.	Total	Type	Summary
California	1½	1½	3	Comp. B	Composition Type A, 6 ;
Colorado	0	3	3	Comp. A	2 Course Type, 2 ; Composition
Illinois	4	3	7	2 Course	Type B, 1 ;
Iowa	0	2	2	Comp. A	average proportion of literature
Kansas	2½	2½	5	2 Course	to composition, about 1 : 3.
Michigan	0	3	3	Comp. A	For the middle west alone,
Missouri	0	3	3	Comp. A	California and Colorado ex-
No. Dakota	0	5	5	Comp. A	cluded, the proportions are sub-
Ohio	0	2	2	Comp. A	stantially the same.
	8	25	33		

TABLE VI. OTHER WESTERN COLLEGES

	Lit.	Comp.	Total	Type	Summary
Beloit	3	2	5	2 Course	2 Course Type, 4 ;
Cincinnati	2	2½	4½	2 Course	Composition Type A, 2 ;
Colorado College	0	3	3	Comp. A	Composition Type B, 1 ;
Huron (S. D.)	½	1½	2	Comp. B	average proportion of literature
Knox	0	2	2	Comp. A	to composition, about 5 : 8 ;
Northwestern	2	3	5	2 Course	average proportion for the
Stanford	3	2	5	2 Course	middle west alone, 7½ : 11.
	10½	16	26½		

TABLE VII. WESTERN COLLEGES (COMBINED TABLE)

The western colleges taken together, by combination of the two preceding tables, show the following : Composition Type A, 8 ; 2 Course Type, 6 ; Composition Type B, 2 ; average proportion of literature to composition, about 1 : 2 (18½ : 41). The middle west, Colorado and California excluded, shows much the same proportions ; *i. e.*, Composition Type A, 6 ; 2 Course Type, 5 ; Composition Type B, 1 ; average proportion of literature to composition, 14 : 31.

(7) ADJUSTMENT TO THE SCHOOLS

(a) *Anticipation*

About one-fourth of the colleges provide definitely for the anticipation of freshman English in school ; but in most of these the provision is rarely used. Baltimore, Chicago, and Ohio report about 2 per cent. ; Illinois, about 10 per cent. ; Harvard, about 25 per cent. ; Leland Stanford, in which both courses of the Two-course Type are elective, reports about 33 1-3 per cent. in literature alone. This is quite exceptional ;

for the tendency, so far as any generalization may be attempted, is to accept advanced work, not in literature; but in composition. The same tendency appears in the provision of four colleges (noted above under Composition Type A) for advanced sections.²

(b) *Bearing on entrance requirements*

It is generally assumed that the schools can achieve higher and surer results in composition than in literature. Tho there is evident dissatisfaction in certain quarters with the actual results of entrance requirements in composition, there is no less evident inclination to build on these results rather than on any achieved in literature. Those colleges which complain that they must devote a good deal of freshman year to securing practically the results in composition which the entrance examinations secure theoretically, ignore altogether the results of the schools in literature. On the other hand, one of the colleges that most definitely build upon their entrance requirements in composition, as showing results practically secured by the schools, forthwith applies the gain in time to literature. Considering itself relieved more and more by the schools of a former burden of elementary composition, it has devoted its freshman course more and more to literature. But in so doing it makes no more acceptance than other colleges of results in literature as achieved by the schools. At most, colleges will recognize some familiarity with books; at least, they will recognize no definite result whatever. In both cases the test is what the college actually does as a result of what it finds the schools actually to have done.

² Cornell publishes the following provision (Catalogue, p. 19): "Candidates evincing marked ability in the Cornell entrance examination in English are admitted to Courses 2a (Advanced Composition), 4b (Exposition), and 6a (Argumentation) without taking Course 1 (Elementary Composition). Students admitted upon examination by the College Entrance Examination Board, and students admitted upon Regents' diplomas . . . may obtain the like privilege by submitting to a test in writing upon familiar topics, some of which will be connected with the entrance books." Such students are few. They receive, not advanced credit, but merely the privilege of substituting a higher course. Illinois writes: "We have no provision for the anticipation of this course by examination (*i. e.*, before entrance); but such students as pass a satisfactory examination upon coming into the course are transferred to an advanced course."

Are entrance requirements adjusted proportionally to this practice? If the college wishes the schools to do more and better work in composition, or if it finds the schools doing more and better work in composition, and if at the same time it practically ignores the work of the schools in literature,³—why, then, does its entrance requirement lay so much stress on literature? The more elementary the freshman course in composition, the greater the apparent inconsistency. Each college must judge this for itself; but there is evidence that freshman composition in many of these colleges is devoted quite largely to bridging a gap between the entrance achievement in composition and the entrance requirement, between the point of proficiency actually attained by the schools and the point of proficiency desired by the college.⁴

Nor does it seem very difficult to throw the emphasis of the entrance requirement frankly and specifically on composition without discouraging the school study of literature. To leave the schools freer for what we say that they can do, or find that they do, namely for preparation specifically in composition, would probably no more banish from the schools the study of literature than it would banish from the college the study of composition. To make the entrance requirement

³ "We take no notice of the literary value of school training," says a prominent department of English; and this position, tho often less openly expressed, is held very commonly. The same department, in explaining why very few candidates succeed in anticipating freshman composition, says: "Not one beginner in two hundred is thoroly safe in sentence-structure or in paragraphing." Many colleges would agree with this estimate.

⁴ The extreme case is as follows, from one of the largest universities in the country: "If the previous school work could be in any way depended upon, I should say that the work in college should be to develop skill and facility in expression. My own experience in college, however, has led me to the conclusion that the freshman class must be drilled in spelling and punctuation and the simple grammatical rules." The average is substantially as follows: "We expect the secondary work to insure a reasonable degree of accuracy in composition, for our freshman work is directed chiefly to the attainment of effectiveness or skill. If any student shows us that in his case our expectation is at fault, we send him to a special class in which instruction is given adapted to his needs" (*Iowa*). This average is less than the common requirement at entrance, and much less than what is thought to be the possibility at entrance. One of the larger New England colleges says frankly: "The whole course is an attempt to bring the men to the point where the high school should have brought them."

primarily a requirement in composition would apparently help to draw a line, not pedantically rigid, but practically serviceable, between school work in composition and college work in composition. It would tend also to relieve the schools of that forced combination which confines much of their writing to topics unprofitable for many pupils. It would answer the serious demand of the schools, not for less work of preparation, but for fewer subjects. Whether or not this is the solution, we cannot ignore this aspect of a complicated problem. Either we should frankly direct the schools away from those aims which we practically declare to be futile, and toward those other aims which we practically declare to be achieved or entirely possible of achievement, or else in some other way we should make our theory conform to our practice.

CHARLES SEARS BALDWIN

YALE UNIVERSITY

VI

THE DECAY OF ACADEMIC COURAGE

A college consists essentially of students and instructors; of immature and older men, or women, sharing in earnest intellectual life; all else is mere machinery. The best of teaching is a shining example. The middle-aged man must be what he expects the youth to become.

The youngest teachers and assistants, indeed, are but apprentices, necessarily chosen, directed, promoted, released if need be, by the full-grown scholars who have charge of the several departments; at least, the judgment of the latter must be the chief guidance of official action. The full professors unite to form the faculty, *i. e.*, literally, "source of power." Keeping in touch with each other on general ground, they decide, by compromise, as to the required or elective work to be counted toward the degree, on the exact conditions of its bestowal. In this whole task they are a competent court of final appeal, deciding all questions by free debate and majority vote. Of course their powers are limited and hedged in by the social conditions, even by the statutory laws, of the larger community.

Meantime, the real task, the service which justifies the outlay, is the upbuilding of character. Those who do not believe in, and exemplify, the moral and civic worth of culture, have no place at all in the higher education. Mere learning for its own sake is too selfish, if not too barren, to claim any support from society.

Just how high a position of honor should these academic senators or judges hold? Not lower, surely, than the police justices who pass on criminals, or the surgeons and physicians who aid nature to preserve or restore physical health. As to the "minister,"—be he Roman, Greek or Anglican priest, trini-

tarian or unitarian preacher, or Jewish rabbi,—he is the official creation of a single ethical and social club owning the edifice in which he speaks, or at most of the sectarian organization that includes him and his. That he is in any unique sense a “saver of souls” is no longer recognized by the state at large, as it was in Puritan New England. Finally, his first vow, by which alone he may claim his awesome title of Reverend, is a lifelong consecration to poverty and self-sacrifice.

The selected and experienced guardians of no less carefully selected youth of highest promise have at least as good a claim as any of these to a secure, free, and honorable activity, to an income which shall lift them and theirs out of the material anxieties and belittling destitution of the semi-submerged tenth. If these necessities to efficiency be not offered, the men peculiarly and supremely fit for this indispensable work will not as a rule be drawn to it;—and that is exactly our present unhappy plight in America.

The forces which have thus far stunted the larger academic life are not easily cataloged. Some of them, certainly, are in themselves among the strongest virtues in the national character. Above all, the indomitable physical energy that explored, conquered, cleared, and settled a continent has hardly permitted any adequate realization, or even conception, of leisure, scholarship, culture. Yet the two ideals are by no means exclusive each of the other. That too often unmotherly insular motherland, which taught us the art of world-wide conquest, has also made more attractive than any other race its historic centers of purely intellectual and scholarly devotion,

“Mellowed by scutcheoned panes in cloisters old,
Seclusions ivy-hushed, and pavements sweet
With immemorial lisp of musing feet.”

That the ripest scholarship issues in heroic action or immortal art a Milton alone might illustrate. Even in our own age of specialism, in autocratic bureaucratic Germany, a Mommsen could be at once supreme among scholars and the most fearless of Prince Bismarck’s liberal opponents and critics in the im-

perial Reichstag. What American college professor ever even dreamed of such temerity?

Among the many sound lessons taught by Benjamin Franklin, the homely duty of thrift has been far more heartily accepted than his example in the creation of university and library, in which, according to his means, Mr. Carnegie has hardly yet surpassed him. With the sole exception of Mr. George Vanderbilt, our millionaires do not, like so many Englishmen, retire from "trade," and content themselves with the effort to make a few square miles of their native soil an earthly paradise. Still less do they permit their sons to devote their years, and abundant assured income, to learned research or to liberal professional careers. Business, or "high finance," the struggle to amass ten, a hundred, a thousand millions, is the only game which a successful American seriously considers, for his sons as for himself. With such a conception of wealth and its ultimate uses, there never can be any surplus for large altruistic, spiritual, philanthropic creations. Only once, perhaps, have the living made such use of the principal of a great fortune, and that was largely an accident of total bereavement.

Whatever the good or ill effects of the protective tariff during the last forty years, all agree that it has aided to amass immense fortunes in the hands of many manufacturers, miners, mechanics, speculators, and others, whose insatiate desire for still greater wealth grows ever fiercer with its gratification. Most of these men naturally dread, above all else, "free trade," or radical reduction in tariff. That the abominable heresy is widely held among those impractical dreamers and theorists, "the professors," is a general and not quite ungrounded belief among practical men.

Such scattering unfelt alms as easy good nature, kindly sentiment towards a needy alma mater, or other motives, do prompt, have of course created, or whetted, in every college and university board of trustees, a lively desire for more. Ever more exclusively are these governing boards recruited with financiers. More and more have they strengthened in themselves the delusion that *they* are the college or university. The old-fashioned type of board, made up of liberally educated men,

chiefly of the other professions, usually alumni, is all but forgotten. Instead of performing the task of real or nominal supervision of the scholarly work done,—for which they were supposedly created,—the trustees have come to regard the faculties as mere employees, to be hired as cheaply, worked as hard, as possible.

The president, and he alone, comes into personal relations with the trustees. The names of instructors whom he nominates are utterly unknown to them, and their assent is purely perfunctory. So if he proposes the termination of any employee's contract, they regard that, also, as quite within the province and discretion of their trusted administrator. In all this, the financial gentlemen are applying in naïve good faith, to a mechanism which they utterly fail to understand, the rules for efficiency in a bank or a department store.

The president is not to be so easily justified. He has usually been himself a departmental head, with ambition, pride, conscience, good sense, like the rest. Yet his election to a position of absolute control over his associates usually changes his views with startling suddenness. "The crown prince is often a liberal; the king never."

Tho he can have no real personal policy to create or develop, and bears no financial responsibility, he yet fondly believes himself elevated into a new and superior profession,—“administration.” His new associates spend many times the incomes of his former colleagues; he cheerfully accepts the natural theory, that he also “must” have a social life, and therefore an establishment, totally different from that of a mere scholar and teacher. Yet “mere scholarship and teaching,” to parody President Wilson's phrase, is absolutely the only end for which the institution exists!

One test of efficiency the trustees apply to the president; for one purpose is he really selected and coached: he must develop proper skill and tact in securing large legacies, gifts, or legislative appropriations. Palatial buildings, beautiful grounds, a brilliant equipment generally, are of definite value as evidence of prosperity. They will attract ambitious large-minded donors, who wish to create still other such lasting

monuments of their own munificence. The last thing to be thought of is to raise the wages of the quiet, uncomplaining, unorganized help, whose places can always be easily filled at even more modest figures.

The mere existence of such conditions impresses all too adequately on the professorial mind the necessity for utmost discretion and caution,—with a marked preference for absolute silence,—on all topics which might excite, annoy, repel, the half-hooked goldfish. Now the average college instructor is at least a fairly intelligent rational American citizen. His salary has increased little in a generation. Certainly, any gain to be noted here and there has by no means kept pace with the rising prices of necessities. Even if it had, it would still be true, that the professor has fallen sadly behind the general scale of swift-growing social luxury.

A half-century ago the head of a college department received perhaps \$1500 to \$2500. The judge, the popular clergyman, the family physician, had little more. Even the merchant was well-to-do when he accumulated a quarter million. But a nation of great cities has arisen. Now, the corporation lawyer, the surgeon or medical specialist, even the metropolitan clergyman, who earns only ten-fold the sum first named, can barely live on it “respectably,” upon the social plane he claims as his own. Of course no man dependent on the actual collegiate salary can share at all in the music, drama, costly books, means of travel on sea and land, golf-links, club-life, etc., etc., provided for these and others. As for financiers, a superannuated insurance president can draw in salary or his son in commissions within a twelvemonth, or spend, even, on a single banquet, more than a scholar of world-wide fame like William D. Whitney received in a long life of indefatigable teaching. The semi-lawful combinations of mechanical wage-earners have at least been able to increase their income, somewhat in proportion to the rise in prices. Many a skilled mechanic,—not to mention the hackneyed example of the hotel chef,—earns more today than any university instructor.

Now, if the college man, ruefully watching his own income drop farther and farther below the line of respectable subsist-

ence, actually dares not even discuss national legislation which seems to him to be impoverishing him to the artificial enrichment of men already a thousand-fold better off,—what more perfect nursery of abject cowardice could be devised?

And yet, the only adequate defense for the unproductive capital already sunk in the higher education is that it is a nursery of "good citizens." Does that term still denote well-read, widely-experienced, philosophic, independent men, ready at any crisis to put all their best theoretic and practical wisdom into the effort to guide by reason rather than by passion that popular majority thru which a democracy must in the last resort succeed or fail? If rather, the ideal type is the silent follower of political boss or partisan shibboleth,—then a real and living democracy is no longer desired.

The pittance usually apportioned as salary to the instructor, even in the oldest and richest centers,—about \$1700 on the average even at Harvard,—goes far to explain the notorious fact, that the ablest graduates of each year are likely to seek almost any other profession. But that is by no means the only—I do not think it is the chief—deterrent force.

The fatal defect in the professorial position is rather the degrading tenure on which he holds his place. More helpless than the humblest clerk in a department store, infinitely more so than a veteran female assistant in a Brooklyn primary school, he remains by the sufferance, or departs on the practically irreversible decision, of a single despot. That this despot, whose sentence not merely ends the local career but usually makes all but impossible its resumption elsewhere, is usually an amiable gentleman, even an apparent social equal or personal intimate, makes the situation only the more unnatural. A judge, even tho notoriously corrupt, must be duly impeached and tried. Even if actually removed, he can still practice at the bar. His income is not annihilated. Nor could a physician's livelihood be destroyed by any single loss of official position. In no other calling is a man's life thus in the hands of one other man or woman. Least of all is it fit or needful in the world of pure scholarship, of liberal education.

For, in concerted practical action, some degree of adjust-

ment, of conservatism must be observed. In the realm of pure theory, of thought, of speculative inquiry, the boldest, the most original, the most startling, even, is therein the most useful. Radicalism, idealism, is to be incessantly encouraged. Why else do so many voices declare, that Emerson is the most useful citizen we ever had? The practicable, the financially safe, the conservative, will always have its assured majority, its adequate endowment. In our unimaginative people, of all others, should the dreamer of the dream be the most welcome of men; and doubly so, if he can to any extent translate his vision into terms of practical improvement. To Utopia, to Altruria? Surely! Whither else should he steer? We welcome the boldest inventor and innovator in all else: why not in sociology, most vital, most undeveloped, most illimitable of sciences and arts? If the Idea be impracticable, cannot that fact itself be set forth in calm deliberate reasoning? Are we really afraid of free thought, or of its free utterance? Then is the cataract near indeed!

It is widely declared, that Mr. Carnegie has come to believe the collegiate teacher, even in his middle life, not merely after retirement, to be worthy of a living income, possibly with some margin for books, religion, charity, travel, opera, Shakspearean drama, club fees, even speculative or other investment. With hope, not unmingled with humiliation, be it confessed: this is the only glimpse of financial salvation in the whole horizon.

Far more important, nevertheless, is the general recognition, that personal independence, with a degree of social solidarity, is at least as desirable in a college faculty as in the regimental mess. The colonel is in command; but he alone certainly could not "break" a captain. A fairer parallel is the chief justice, who not only cannot discipline or silence, but does not even outvote, any colleague upon the bench with him.

A promotion, or a call from without, to a seat in the faculty circle, should include as an essential feature a cordial welcome for the newcomer from his future colleagues, based if possible somewhat on personal acquaintance. These colleagues indeed make up the only board competent to select or

elect the incoming professor. His position should be as secure as one on the Supreme bench, unless senile decay, permanent mental or physical disease, or fatal moral lapse, make clearly obligatory his enforced (if not voluntary) retirement by a court composed largely of his associates.

A decade or two ago an old student-comrade wrote me that he had accepted a flattering call to a most venerable and famous American university. Meeting, within twenty-four hours thereafter, his two nearest future colleagues, not merely of the same faculty but of the same department, I congratulated them on their good fortune. Both revealed not only great astonishment, but blank ignorance as to the existence of either my friend or of the chair he was to fill. Few men command more general admiration than the president who committed that error of omission. He is no doubt too wise to repeat it today. Only a very bad system made it possible, typical, then, as in nearly every college it is now.

An autocratic selection of colleagues is probably a less evil than their autocratic decapitation. But, says Dr. Hyde, in the best of good faith,—looking into the crystalline mirror of his own fearless heart,—the executive will always err on the side of tenderness rather than of severity; he will too often and too long retain the useless or even mischievous; never will he use his power unjustifiably on his involuntary rival, on the frank critic of his personal policy, on the inconvenient apostle of the unpopular.

The simplest retort is the Yankee one: Why won't he? Who can be sure, that even into the serene presidential soul jealousy, cupidity, timidity, partisanship, each human weakness, shall never enter? Whether any academic autocrat could be so secure, and so conscienceless, as to decimate a faculty in the pure enjoyment of tyrannic power, or to enforce absolute submission by the survivors, is a problem for the psychologist.

But surely it is accepted as the experience of the race, that unchecked power is an evil alike to master and to slave. From Epictetus to Uncle Tom, vested interests have been eager to give over the free-souled philosopher to a strong and conservative boss. But such poor wisdom as humanity attains

has come, whether in Academia or Concord summer school, in parliament or town-meeting, out of the unbridled discussions of equals.

To hold a Damascus blade over other men's lives, careers, reputations, may still be the fashion, in Damascus. The Anglo-Saxon has had the right, for uncounted centuries, to a full hearing and decision by an open council of his peers. Dr. Howard and Dr. Jordan were two such peers. A state of things where either, of his own initiative or under pressure from a kindly multi-millionaire neighbor, could terminate instantaneously the career of the other, was—is—fatally un-American.

Yet Dr. Draper says the general tendency in America to absolute executive power in academic life is itself proof of the necessity. African slavery, child-labor, financial crippling of the wife, all have made, in vain, the same feeble plea. It is not a good year for mere intrenched usage. Two other pleas are indeed often heard: "The American professor is a poor bewildered sheep who doesn't know what he wants," and "Too much liberal study unfits a man for practical civic and social responsibility." These, we say, are utterances often heard; but they are not to be expected inside the academic walls. And no other plea for the dictatorship is available.

The president of the college faculty should be at least first nominated by its members, and will in most cases be chosen from among its members. So at New Haven, Princeton, Morningside, a specialist in economics, in history, in education, has recently been promoted to the head of the table. Each is still a modest scholar among scholars older or younger, more or less famous, than himself. Their equal yesterday, what plenary inspiration or anointment makes him today fit to be sole arbiter of their doom? The little son of a beloved and still lamented statesman was told on election day: "Tomorrow your father will be the biggest man in Massachusetts." But at breakfast, eying the young governor-elect with bitter disappointment, the baby cried: "Why, papa, you ain't a bit bigger'n you were yesterday!"—*Memento et te mortalem esse!*

Let us try to imagine, in the institution really closest akin, such an obsession as vexes today the collegiate world. Let us suppose that a fusion of trustees should bring all the evangelical church property, in each city or county, under a single financial control. This secular board, too busy to give sustained personal attention to such things, appoints an executive officer, selected mainly for his ability to raise subscriptions, not himself active as pastor or preacher, at, say, \$10,000 to \$15,000 a year. He in turn selects and appoints all pastors and assistants, on stipends of from \$1000 to \$3000.

The average financial showing, the material solvency of each parish, would very possibly improve. There would always be men ready to fill the pulpits, and they would nearly all scrupulously avoid offending seriously the administrator, or the dominant sentiment in the board. The trustees would be perfectly satisfied with their own work, and especially with the quiet loyalty of their employees.

But ought the teacher of truth to dread anything, save God as revealed to his own conscience? Could Beechers or Abbots breathe in such an air? Would men content to wear such fetters command, or deserve, the enthusiastic admiration of aspiring youth? Could they illustrate the highest ideals of heroic, patriotic leadership? They could not; and the college teachers cannot. Men conscious of such capacity seek other paths that lead to freer fields.

It is devoutly to be hoped, that the American man of culture, especially the collegiate or university teacher, is to be made "independent." Independence is not merely or mainly a matter of living income. Even utmost security of tenure, dignified place in the general community, will prove no panacea. Such conditions, however, may at least set each brave and wise man free, to live down the stigma that Wendell Phillips fastened so mercilessly on his own class and type:—the cowardice of the American scholar.

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VII

HIGHER EDUCATION FOR WOMEN

A writer for the April number of the *EDUCATIONAL REVIEW* expresses his point of view in regard to the higher education of women. His argument is as old as the race. His method is modern. Statistics and microscopic examinations of the gray matter of the brain give to the whole a pseudo-scientific air that ill accords with sentiments that would be comprehensible coming from a Chinaman, or from the master of a Turkish harem. The writer is the principal of a girls' high school. For the sake of convenience, we reproduce his argument.

"Woman is inferior to man in her natural intellectual endowments. She is a loser in the intellectual race in acquisition, origination, and judgment. Therefore it is wrong to force upon her the same sort of education that man, her superior, is receiving. Man's education fits him for life, to face the world as it is, while the same education in no way fits woman for her vocation in life,—namely to bear children. Woman's colleges are nothing more nor less than institutions for celibacy."

Mr. Felter would not deny higher education to women, but he would change the curriculum. He would give them that which would enable them to be good mothers. He would do all to promote their health, would relieve them from all studies which require reason, that one quality of mind in which woman is preëminently lacking. He would substitute child study, pedagogy, and nursing. Botany is feasible if the Latin names are omitted,—and then, in a sudden burst of generosity, he says: "The course in English should be comprehensive and exhaustive." "Then," he concludes, "would woman be saved from destruction, and with her the great ideals which have stimulated her in the past. Then would woman be able to repay, in some measure, her debt to man, who, grudgingly perhaps, has extended to her the benefits of higher education."

Rarely does the egoist, man, express himself so frankly! Woman's mind is of an inferior order; therefore she is not capable of receiving higher education. Woman's sole function is a physiological one, that of propagating the human race; therefore she does not need higher education. A German writer, who is working for the emancipation of women, points with pride to America as the land where coeducation has proved its value, where women have been given a fair trial, and have shown their intellectual worth. Let us not disillusion him by sending him the April number of the *EDUCATIONAL REVIEW*!

President Hadley of Yale, in a recent address at Vassar, said that the purpose of higher education was to train for public service, and he made no distinction between men's and women's colleges. If, according to Mr. Felter, woman can serve the public only by propagating the human race, then the very idea of higher education is superfluous. If woman's sphere is the kitchen, or the nursery, then any sort of education, higher or lower, is unnecessary. Consider the beasts of the field. They bring forth their young and care for them tenderly, with a tenacious mother love that rivals the human variety. No mind, no training, is necessary for them. "Woman's function is the same," says man. "Why credit her with intellect or understanding? Why burden her with mathematical problems? Why call attention to the fact that she has a mind and a soul?" They are unnecessary adjuncts surely. Nature has evidently made a mistake here. What a great economy it would have been in the evolutionary process if woman's mental and spiritual natures had remained in the primitive state of our ancestral chimpanzee!

One of George Meredith's egoists says, "Woman is the hardest thing that man has had to tame." What a long, varied process this taming has been. Slavery was the first, the middle, and the last resort,—slavery in one form or another. In the earliest days, woman was the common property of her tribe. Her only function was to propagate the race. Later she became the property of an individual. Her physiological function was, as before, of prime importance. Then came the days of

chivalry, when man fought for her; then the days of romantic poetry, when he wrote love sonnets to her. Here, her purpose was twofold;—to reproduce the race, of course, but also to satisfy certain nobler and loftier strains in man's nature, which thru all these ages went on developing in leaps and bounds. And woman's nature? Well, that was scarcely worth considering. Her inferiority was indisputable. Man's authority was supreme.

If a race had been enslaved to the same extent, for the same length of time, there is no doubt but that intellectual, moral, and physical degeneracy would have resulted; for without the infusion of new blood, habit and environment would have effectually destroyed any original potentialities. This is the scientific fact that man seems to ignore. He would like to have woman devoid of intellect; he really cannot see the use of it. He has done all in his power to deprive her of it, but Nature has arranged it so that he is his own worst enemy in accomplishing his purpose. The power of heredity acts thru the female, as well as thru the male. The boy inherits his mother's eyes, disposition, and constitution. The girl, alas! may inherit her father's brain. In the development of the embryo, Nature does not suddenly step in and say, "this is to be a female. This creature's brain must not be fitted for reasoning. This is to be an emotional brain, a memory brain, even a witty brain, but never a reasoning brain." Yet this is what every critic of higher education for women implies, when he chooses her mental inferiority as his chief ground of objection. The great logician, the great mathematician, may transmit all his wonderful power to his female posterity. "Nature has given the clew," says Mr. Felter, and say we, "Let us follow Nature." At birth at least, boys and girls have a fair and equal chance in the intellectual race as well as in the physical. Whatever inferiority exists is due solely to training. How soon does the training of boys and girls begin to differ! We would not deny that woman is inferior to man in physical strength, but we do assert that this inferiority is unnecessary, is due to her being treated as a hot-house plant. Consider the Amazons of old! Tacitus tells us that among the Germans,

the women were in no way inferior to men. Among savage tribes generally, where the life of men and women is practically the same, there is no difference in the size, weight, etc., of men and women.

The average woman of today may be inferior to man in her intellectual powers, if the woman in the kitchen is taken as the type to be compared with the graduate of Harvard or Yale. The extreme emotionalism of women, their "lack of deep and thoro information," even their failure to reason, are due entirely to the enforced disuse of their minds, just as their weakened bodies are due to disuse of their muscles. Woman's education, when she has had any, has been in music, and art, and poetry. Her "accomplishments" have been the very things to stimulate and produce over-emotionalism. Her entire dependence upon man has produced a torpidity of intellectual activity, and her indoor life has produced a general weakening of her constitution.

Beware! ye men of the world! Ye who have at heart the interest of the race. Think of your unborn children! You will not deprive your women of physical exercise. They must have strength to transmit to your children. Do not deprive them of mental exercise, for you are thereby weakening the intellectuality of the race, whose welfare you have so much at heart. Woman's mind and body and soul may all be transmitted to your male offspring. Who knows what the human race might have accomplished if both parents had been allowed complete intellectual development? What progress might have been made if the results of man's intellectual development had not been continually wasted in the process of counterbalancing woman's lack of development!

In 1860, Matthew Vassar said, "It occurred to me that woman, having received from her Creator the same intellectual constitution as man, has the same right as man to intellectual culture and advancement." Believing this, he founded Vassar College. Needless to say, he was criticised and derided. Shall we say that his venture was a failure? Mr. Felter, of the Brooklyn High School, would force us to believe that it was. He has done more than theorize. He has given statistics.

Only 82 out of the 684 undergraduates at Vassar elected mathematics. Only 3458 out of the 483,517 patents recorded at Washington were by women. Startling figures! Let us examine them and their source. They come from the principal of a Girls' School, whose chief ground of complaint is that the maidens learn their geometry theorems by heart. We sympathize, but hasten to congratulate him, for not having made the humiliating discovery that many boys do the same! There are stupid boys as well as stupid girls. True, no woman has yet rivaled Newton in the field of mathematics, but few men have. The head of the mathematics department at Vassar was, until last year, a woman. All the instructors are women. The head of the same department at Bryn Mawr is a woman. Of the 684 undergraduates at Vassar 300 were Freshmen, for whom mathematics was compulsory. Eighty-two out of 384 gives a proportion nearly equal to one-fourth. These students were, needless to say, especially gifted in mathematics. They were of the type who did not learn their theorems by heart. We would like statistics from men's colleges (not technical schools), to show the proportion of reason existing among women and men, since the election of mathematics is regarded as a criterion.

One of the most hopeful signs in the intellectual world is the tendency, on the part of both men and women, to elect work that makes some vital connection between the college and the outside world. The largest classes at Vassar are in English, economics, philosophy, biology, and history. Some small degree of reasoning power is required for each of these. Beginner's Greek, which is purely a memory subject, should be most popular according to Mr. Felter, since girls excel in memory. Yet only five girls elected that when eighty-two chose mathematics.

As to the records of patents, the number seems remarkably large, when we consider what woman's training has been in the past. Her recognition as an intellectual member of society, has only been thru the last twenty-five years, a recognition which is still bitterly contested. About an equal length of time, she has been thrown out into the world to labor for her-

self. We do not expect women, whose sole duties are those of the household, whose sole training has been the bringing up of children, to exercise their ingenuity in inventions, any more than we expect the bricklayer or carpenter to produce a phonograph or to translate the Homilies of Aelfric. Inborn ability is a great factor, but education and environment are equally potent. In women, as in men, rare examples occur where the native mind has triumphed over the obstacles of training and environment, and we have a George Eliot, a George Sand, or a Charlotte Brontë. Men delight in saying that women have never produced a genius. Englishmen taunt Americans with the same charge; but where is the American man who believes that he has less ability than an Englishman, simply because his land has not produced a Browning or a Shelley? Or where is the American university that would advise curtailing its curriculum for the same reason? Geniuses do not in any way register the mental caliber of their contemporaries. Education must be planned and pursued as tho they were not.

Mr. Felter remarks that "a man's education fits him to face the world as it is." Yet upon this one question of woman's worth as an intellectual factor, he seems entirely incapable of realizing the truth. Here is one fact in the world which his inherited traditions do not allow him to face. Woman is working beside him in the factory; she is studying beside him in the university. She is not deploring, not even guessing at her inferiority. But man is asserting his old-time superiority, in a thousand different ways. In the field of labor, it would seem possible, even necessary, to judge men and women by the results, by the actual accomplishment of work done, rather than by post-mortem comparisons of the depth, and breadth, and thickness of the gray matter of their respective brains. But here, where skill, rapidity, everything has shown woman to be man's equal, he proves his superiority by stating it,—by giving woman, as a just wage, an amount equal to half that he receives for accomplishing the same task in the same length of time.

And so in the intellectual world. The results are the same.

Where boys and girls, men and women, recite in the same classes, do the same sort of research work, there is no difference in results, except at Chicago University perhaps, where segregation is said to have been necessary, because the women outstripped the men. By far the greater number of teachers in the country are women. The education of the masses is practically intrusted to women. In journalism, in literature women are fully as active as men. In fact, there is no field today, in which intellect counts, where woman is not holding her own with man.

And still man goes on complaining of woman's inferiority. That is his trump card, but there is another that he handles with equal dexterity. Woman's health is endangered by a college education! The race is in peril! Man to the rescue! But he raises no great outcry against the millions of women who are working in factories under the most unsanitary conditions. Girls enter the factory at fourteen, often earlier than that, and work until they marry. Women work up until a few weeks before a child is born, and then return to work before they have gained enough physical strength to perform their ordinary household duties, leaving their infants to be brought up by the older children. Here is a state of affairs which well might alarm, not only man but any who have the real interests of humanity at heart,—not only the *future* of the race, but the *present* of the race.

The college woman matriculates at eighteen or nineteen. Attendance at a well-equipped gymnasium is compulsory for four years. Out-of-door life is a prominent feature of every woman's college. In every case, the college girl has a larger amount of physical training than her carefully sheltered grandmother did. Even Mr. Felter, who claims that higher education unsexes woman, reluctantly concludes that physically, she is not injured by four years at college. But he goes on to say, even though college women may be fitted to be mothers, they do not wish to be. Here is, after all, the real menace to the race. This statement that college women do not marry can be refuted by fact as well as by theory. Fifteen out of a class of two hundred were married within one year after leaving

college. This is a fairly large number, when it is considered that the big majority of women go to college, so that they may be self-supporting by the use of the mind, rather than by the hand and body alone. The college woman does not consider herself an "old maid" at twenty-five. Shopgirls and factory hands do not marry at sixteen, as was the custom forty years ago. The race does not seem in danger of perishing, however, because woman has deferred her marriage day until she has attained a certain maturity of mind and body.

There are college women who will never marry, perhaps. These women have other work to do. This work may be the supporting of a family, the education of small brothers and sisters, or it may be the relief of suffering humanity. The unmarried college woman is assuredly a useful member of society. She has done much to destroy the obloquy that was attached to the term "old maid." As educators, as philanthropists, and as mothers, college women are working for the general betterment of society. Until man is capable of recognizing the need, and appreciating the value of woman's work, he has no right to cast reproach upon that very occasional college woman who declares that she has no right to bring children into the world until she has at least tried to make the world a better place to live in.

There is another side to this marriage question which man seems to overlook. George Bernard Shaw to the contrary, man is still the wooer. May it not be that his hatred, or perhaps his fear, of the woman who thinks, has deterred him from wooing her? What if, after all, it were man, who is endangering the perpetuity of the race? Let us not believe it! Let us be charitable! These poor men are undoubtedly seeking wives who will love, honor, obey, bow down, and worship them. So is the race saved from destruction!

If all men expressed their views as frankly as this principal of a girls' high school has, the number of college women who marry might shrink perceptibly. Fortunately the love sonnet is still in existence in one form or another. A woman who feels any sense of power would naturally hesitate to unite herself with one who declared that her only duty was to

propagate the race. The fact that she must bear a child does not signify that her whole life before that time is to be one long period of preparation. Even her great grandmother, before the days of higher education, did not regard the act of motherhood in that light. And that duty performed, is she no longer to be considered a useful member of society? Does she owe nothing to herself, nothing to her fellow-women? Is the only "great ideal that is to stimulate her" to be the welfare of the race? Are none of those "broader interests of man" within her sphere? Are the great social movements beyond her province? Why not enclose the women of the world in an Oriental harem? Preserve all the male offspring, a sufficient number of females, and then, when their days of usefulness are over, quietly exterminate the women by some painless anæsthetic. Such an economic device would serve to counterbalance nature's prodigality in bestowing mind and soul upon a female!

By no means be it understood that woman's education is beyond criticism today. It is at fault, just as all higher education is at fault, when it tends to sever the connection between intellectual training and real life. Our American colleges must preserve those high ideals of culture which are in danger of being swept away by the greedy commercial spirit of the day. But this cherishing of ideals must not produce an aloofness from the real interests of the world. The crying need of the day is for reform, social and political reform. The very highest sort of ideal is necessary here, the ideal of perfected humanity, an ideal that must put us to shame, so long as we have to face the abhorrent reality of labor under unsanitary conditions, the cruel employment of children, and the deadly sweatshop. Nor do such problems concern men less than women. The making of a mother must not destroy a citizen. Women already realize their responsibility and are doing effective work. Let men recognize and appreciate their struggle. Side by side, shoulder to shoulder, our college men and women must work together for the general betterment of humanity, not only by the infusion of lofty ideals into society, but by the infusion of noble and worthy deeds. Let us adapt our college

curriculum, not to men, not to women, but to human beings, who are a part of organized society. Let petty quarrels over the comparative intellectual worth of men and women cease, so that time may be given to realize more fully the true value of mutual activity, of men and women working together for the common good.

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VIII

DISCUSSIONS

EDUCATION IN ART: A CRITICISM

The recent condemnation of pictures published under the auspices of the Art Students' League of this city has provoked various comments and suggestions respecting the treatment of art from an educational point of view. Some enthusiastic reformers propose to educate the young to such an appreciation of the nude in art that all harmful influence that now seems to attend the exhibition of it will be eliminated. A definite scheme with such a purpose in view is suggested in a recent magazine article. "If well-selected pictures and statues of the best human figure could be put in our schoolhouses, and children be led to look upon them in the right way, contaminating influences would have much less chance of doing harm than is now the case." Altho this proposition is introduced by an IF, the author evidently considers the plan quite feasible. Such innovations in education usually proceed from doctrinaires, and are not based upon any intimate acquaintance with the subjects or laws or philosophy of education.

If there is anything settled in modern educational practice, it is that no experiment in education has any chance of success which is not based upon an adequate knowledge of the child. The subjects of this experiment must of course be children between the ages of six and sixteen. It will be convenient to divide them into two classes; the first, those between six and ten years of age. What capacities already developed do children of this age possess which will enable them to appreciate the nude figure? Such appreciation implies a nice perception of proportion and the relation of parts, as well as the ability to recognize lines of beauty. A slight acquaintance with children will make it evident that they lack the mental development

necessary for the formation of such judgments. Their minds are not furnished for the assimilation of such knowledge. In their observation of plants and animals they have been trained to take note of the most characteristic features of structure, and of those habits by which they are adjusted to the world around them. Their interests do not lie in the direction of those nice discriminations which are the foundation of any real training in art.

The training of children between ten and sixteen years in familiarity with the nude is to be deprecated for a similar reason—ignorance, or a disregard of the physiological development of the child. It is well known that it is between these ages that the sex instinct appears in both boys and girls. Their curiosity is aroused in respect to the origin of life and the reproductive function. Unless wisely directed by parents, this most powerful instinct is quite likely to dominate the thoughts and imaginations of children. They have not reached the age when they can be expected of their own accord to control their thoughts and feelings. It is a physiological fact that there is a very intimate connection between sight and the excitement of the sexual instinct. To expose children of this age to the frequent sight of the nude is to put them in peril of a premature or excessive development of their sexual nature with all of its attendant evils.

But even if it were possible by such familiarity to improve the æsthetic sense, we must still reply that this would be no compensation for an unbalanced sexual organism, and the loss of moral purity. We cannot afford to lose sight of proportional values in the conduct of educational processes. If it is more important to cultivate the moral than the æsthetic sense, and to prepare children to meet the responsibilities of social life to the best advantage rather than to make them connoisseurs in art, then we may well hesitate before we hang on the walls of our schoolhouses representations of pictures which have a questionable place even in some of our museums.

F. W. OSBORN

SOME REASONS FOR QUITTING¹

For two or three years past, there has been considerable discussion in the newspapers concerning the scarcity of teachers. Generally this seems to be ascribed to the low wages paid; and I have wondered if this is the real reason. It seems to me that the majority of wage-workers could earn their present incomes just as easily in other vocations; and I believe that, after one's needs are supplied, usually other conditions than the question of wages determine one's occupation. That is, after one's living is assured, money is no longer the principal reason for continuing in any calling—at least, with the mass of people. School-teachers are no exception to this rule, and yet many men give up positions with fair salaries attached, to engage in other work. And I believe this is consciously or unconsciously due largely to the consideration—or lack of consideration—which the public shows for the teacher.

I have taught for six years in a western town where everybody knows everybody else and his business. The people always paid me all the money they could get and would have done so this year. They seemed pleased with my work, and I have reason to believe they were satisfied. Yet last spring they generally denied that I was a resident or citizen or entitled to the ordinary rights of a citizen. Suppose I had worked in a barber shop there for six years, or had been clerk in a grocery store: Would people have declared me a transient? I doubt it. It is merely my calling that makes me an alien in every town. The public refuses to grant to teachers—and preachers—the standing it gives to any one else who pays his taxes and minds his own business.

A man of my acquaintance taught for eight or ten years in a town, and finally bought a home there. From that time the school board considered that he couldn't afford to leave, and instead of increasing his pay for better work, they cut his salary because they had him at their mercy. I don't believe this is a rare case among teachers whose salary will allow them to buy a home. And what man wishes to engage in, or remain

¹ From *The Interstate schoolman*, Hutchinson, Kansas, October, 1906.

in, a calling that practically permits him to own nothing that he can't carry away in a handbag?

If a doctor moves into a new town and treats his patients successfully, he acquires a reputation as a "good doctor," his practice increases and his compensation keeps pace with it, and after some years it is impossible to drive him away. The same thing is true of a lawyer or dentist. Even the groceryman, by fair dealing and remaining in one location, acquires a standing that is a commercial asset to him. The teacher goes to a new town, teaches an excellent school, acquires a reputation as a good teacher, the people can even see his good influence on the character of his pupils; but one spring the sons or daughters of three or four prominent citizens fail of promotion—they were too busy having a good time to get their lessons—besides, "he won't dare to make *us* fail"—and what happens to the teacher? He has to hunt a new place. The standing he has acquired is not a commercial asset to him. Isn't a man foolish to engage permanently in a calling where such things are possible?

I spoke a moment ago of the doctor's or lawyer's compensation keeping pace with his success—is this true of the teacher? In a school having four grade teachers, one good one and three poor ones, the salaries paid will be exactly alike. A man will spend four or five years making a school—he will begin when it is worth nothing and build it up into a force in the community and in the children's lives—his salary will be grudgingly increased until it is at last a fair compensation; and then some raw graduate of a college or university—some callow youth who doesn't know the first thing about *real* teaching—will get the position and begin with as large a salary as the sure-enough teacher quit on. Every teacher of experience knows where two men are working and the poorer teacher draws the better salary. What is it that leads one to do better and better work year after year? Generally it is the hope of appreciation and better pay. Neither of these things comes to the teacher. I personally know people in Kansas who have taught a poor school every year for six, eight or ten years and yet have drawn good wages. And they

can keep at it for the next twenty years if they wish. What inducement is this to hold out to really capable men?

And this is really the fault of the public. Perhaps there is no standard by which to judge, perhaps they don't know a good teacher when they see his work. But they should set up a standard. It is their business to know, and the future of their children and of the nation is involved in it. How can they be held blameless for not knowing and doing? Judging from the history of other lines of work, there will never be really good school systems until the teachers are paid according to their work—until the poor teacher is crowded out just as the poor lawyer or poor doctor is now. And the public must finally do this—the teachers may help, but the decision rests with the public. And until it is done, the public need not expect capable men to remain in the calling.

And then people generally sneer slightly at the man who merely teaches school. They say, "It's a lazy man's job;" or, "It's a woman's work;" or something similar. Isn't that encouraging for a real live *man* to listen to? Men, capable, intelligent, vigorous men, like to engage in competition with other men just as capable—or nearly so—as themselves. Men don't wish to be forced into competition with the women any more than women are content not to compete with men. But there is a tendency just now to say that women are natural teachers and the work should be given to them, and so men must quit it. This is a fallacy. Woman has little logic and boasts that she doesn't need it because her intuition does better. How much "intuition" can be taught? It is the main purpose of the school to train and develop the logical faculty of the mind; and how can it be done well by those who haven't that faculty, don't recognize it when they see it, and cannot appreciate it when it is shown to them?

Another purpose of school is to prepare for life. Now, ever since the dawn of civilization, circumstances have narrowed woman's view of life and the world's experience, while it has broadened man's view. Every one of mature mind knows this, whether he will admit it or not. Because of this natural difference, woman does not make the proper connection

between school and life; often she makes no connection at all. There are hundreds of school children with no real notion that school is more than a fashion—a form—that it is really a preparation for life—from this cause alone. Won't a natural teacher? Perhaps, for lower grades, she is; but rarely is she fit for upper grade work. And man doesn't like to compete with her in this any more than he does in washing dishes daily.

If any read this, some will be ready to cry, "Pessimist." Say what you please, but don't deny the facts. And really your classification is at fault. An experience of seventeen years has taught me that the man who deliberately enters upon school-teaching as a life work, and sticks to it, is either a philanthropist or a fool. Put me in either class.

CHARLES B. TAYLOR

NESS CITY,
KANSAS

ALBERT G. LANE¹

(1841-1906)

Josiah Lane, the father of Albert G. Lane, came to Cook County with his wife in 1836, and settled at Galewood on the old Gale farm a little northeast of Oak Park, then a long distance from Chicago, but now within the city limits. On this farm Albert Lane was born March 15, 1841, and there the old farmhouse still stands. Albert was the oldest of eight children. When the Lane family came to Cook County in 1836 the total population of Chicago did not exceed two thousand, and the exports from the Chicago port that year amounted to \$1000.64.

Soon after the birth of Albert, the family moved to Chicago and settled in a cottage on the site now occupied by Rothchild's department store. The cottage was later moved to 132 W. Monroe Street, and still occupied by the family. Upon the great open prairie used as a cow pasture, the boy Albert ventured as far west as Ashland Avenue in the capacity of

¹ A Memorial Address delivered before the Principals' Association of Chicago, Ill.

herdsman; and from this time the sturdy, independent character of the lad rapidly developed. When he began school, the entire school attendance of Chicago did not equal that of one of our largest schools at the present, and there was no high school.

As a carpenter, Albert Lane's father found difficulty enough in supporting his family of eight members on a dollar and a half per day, and at the age of twelve years it seemed necessary for the boy to leave school and go to work, as he could thereby turn in one dollar and fifty cents per week toward the family expenses. Albert cheerfully complied, but his heart longed for his school, and he gained permission to return to it by offering to earn the dollar and a half per week out of school hours. He did it, of course—he never failed at anything—and by selling papers he carried himself through the grammar school and into the first class of the first Chicago High School. With this class, he would have been graduated from the high school under Mr. Charles Dupee in 1858 at the age of seventeen years, but he had to leave school a little before graduation.

In the Lane family teaching was second nature, and to it Albert naturally turned. In the year of his graduation he was placed in charge of the old Franklin School and was its principal until 1868, a term of ten years, when he succeeded John F. Eberhart as Superintendent of the Cook County schools.

With one interruption of four years he filled this office with distinguished ability until December, 1891—that is, for nineteen years. During the four years' interim he turned his attention to banking, with marked success.

1873 brought to Albert Lane misfortune such as tries the very souls of men and tests their integrity to the utmost. As County Superintendent, he had on deposit in the Franklin Bank, school fund money amounting to \$33,000. The bank failed and the deposit was absolutely wiped out,—it was a total loss. As a depository the bank had been approved by the county commissioners, and Mr. Lane was probably under no legal obligation to refund the money. To add to his perplexities, he failed of re-election as County Superintendent the same year. Now his splendid conception of honor and his

superb courage came to the front. No legal technicality for a moment dimmed his vision. To him, the educational fund was a sacred trust and without a moment's hesitation he entered upon the task before him.

Getting his bondsmen together, he called upon them to make good the loss and pledged them that every dollar, with interest, should be paid back to them. He converted into cash whatever property he had accumulated, applied it to the debt, and then for nineteen long years he labored and saved to wipe out the balance, and he did it. The principal and interest of the debt amounted to \$45,000. It was my good fortune to call upon him at his office at the consummation of this struggle. I found him out of the office, but he came in soon after, and never shall I forget the sort of glory that seemed to envelop him, as, stretching to his full height, he brought his hand down upon my shoulder and said with the utmost intensity, "Bright, I have just paid the last dollar of it." In the annals of Chicago can be found nothing more thrilling than this heroic struggle of Albert Lane. His will be a name to conjure with in teaching civic virtue when that of many a Chicago millionaire has passed into oblivion.

Beginning in December, 1891, Mr. Lane served as city superintendent of Chicago for seven years. They were the most arduous years of his life. Thru the pernicious meddling of the City Hall, politics became rampant in educational affairs, and the balking of his plans for the schools so added to the natural burdens of the office that even Mr. Lane's splendid health gave way. He never recovered from the strain of the last two years in the city office and it was doubtless fortunate for him that he failed of re-election in July, 1898. Here again, Mr. Lane's loyalty to the Chicago schools shone forth, and with it a dignified manliness of character. He cheerfully accepted the office of district superintendent and in so doing, rendered a service to the city of Chicago which it would be difficult to over-estimate. His intimate knowledge of school affairs, of city, county, and state, was unequaled by that of any other man. This, added to his sound judgment, his vast acquaintance, and his unselfish devotion to the schools,

made him almost indispensable as a counselor to his successors in the office of city superintendent. This service was freely rendered and fully acknowledged. He remained at his post until well into the last vacation, tho often working under intense weariness.

Albert Lane had often expressed the hope that he might "die in the harness," and this desire was gratified. After a short vacation at Bay View with his family, and as the constant companion of his little grand-daughter, he felt called upon to return to his post of duty, but his strength gave out entirely on the return trip, and a very few days closed one of the noblest lives that have ever blest the city of Chicago.

Albert Lane's work was not confined to Chicago or to Cook County. For thirty-five years he was a potent factor in the State Teachers' Association, of which he was at one time president. No other man has contributed more than he to the success of the National Educational Association. For many years he was a member of its executive committee, and for the past ten years chairman of its Board of Trustees. In a recent letter, Dr. Irwin Shepard, Secretary of the Association, said "I do not see how we can go on without him." The National Educational Association accorded him its highest honor in 1892 when he became its president. Few men have enjoyed so general a personal acquaintance among prominent educators thruout the United States as did Mr. Lane, and to none was accorded greater respect.

Albert Lane saw almost the entire growth of Chicago; he loved the city intensely and he gave all the worth of his splendid manhood to her service. His impress upon the county schools was remarkable. He rendered to the city just as generous and devoted service as to the county. This service was fully appreciated by the teachers with whom he worked, and today thousands of them mourn his loss.

As a citizen, Mr. Lane shirked no responsibility. He proved that a schoolmaster may be a man among men, for few enjoyed so generously or so genuinely as he the respect and confidence of his fellow citizens. He was a devoted member of the Methodist Church, and in its service his life was spent.

Thousands of young men connected with the Young Men's Christian Association, of which he was trustee, knew Mr. Lane, admired him as an ideal Christian gentleman, and emulated his example.

His devoted wife said of him the other day, "He was all that a son could be, he was all that a husband could be, he was all that a father could be, he was all that a church member could be, and you know what he was as a citizen and as an educator."

Yes, we know full well. His labors are ended, but the influence of a noble life can have no end. Albert Lane's cheerfulness, his devotion to duty, his courage, his unselfishness, his clearness of vision and fearlessness in living up to his convictions, the charming sincerity of his friendship, and his keen sense of right and justice, all added to the rarest integrity, made up a character which is our inheritance. We admired him, we trusted him, we loved him. We are better teachers because he labored among and with us.

ORVILLE T. BRIGHT

CHICAGO, ILL.

IX

REVIEW

The King's English—By H. W. F. and F. C. F.—Oxford: The Clarendon Press, 1906. 370 p. \$1.75.

At the end of Professor Skeat's thoro-going discussion of *The problem of spelling reform*, delivered before the British Academy last May, the speaker expressed his belief that quite possibly a simplification of English spelling might be effected in the United States before it should be brought about in Great Britain—"because the history of the language is there more generally known." And he added: "I lately met with the President of an American university who said to me (I have no doubt with perfect truth)—'in our universities English takes the first place.' This is one of the facts of which the ordinary Englishman is entirely ignorant."

An examination of this book, pretentiously entitled *The King's English* and recently published by the Clarendon Press, reveals to us that there are other facts of which the ordinary Englishman seems to be ignorant. Unaware that English is studied seriously and scientifically in American universities, the ordinary Englishman is blandly content to remain in blank ignorance as to the results of that study. *The King's English* is the attempt of two of these Englishmen to prepare a practical rhetoric and to provide a book of counsel and warning for all who wish to write clearly and forcibly. But it is prepared upon a plan long since abandoned here in the United States; and its authors have failed absolutely to profit by American experience in teaching rhetoric and by the stimulating contributions of a generation of American educators to rhetorical theory. Apparently the two compilers of this volume have never heard of Professor Lounsbury's *History of the English language* or of his illuminating investigations into English usage. Apparently the text-books of Professor F. N. Scott,

Professor Barrett Wendell, Professor G. R. Carpenter, and Professor C. S. Baldwin are all alike wholly unknown to them. And what is even more significant is the fact that the compilers ignore or are ignorant of Spencer's essay on *Style*, with its invaluable explanation of the principle of economy of attention which underlies and unifies so many scattered precepts of the art of writing. If any proof was needed as to the backward condition of rhetorical instruction in England, it might be found in the issuing of a book like this by the Clarendon Press.

The fundamental basis of the book is scientifically unsound. It is an attempt to teach the art of composition negatively. It pretends to guide the beginner not by showing him what he ought to do, but by warning him what he ought not to do. It is a long series of "Don'ts." It contains in effect little that is affirmative, little that would stimulate and encourage, little that would help a tyro to learn how to express himself simply and satisfactorily. How false this principle is we can see when we note that no one has ever proposed to apply it to any other art than the art of writing. A method disdained and discarded by the teachers of the other arts is not likely to succeed in the hands of the teachers of composition.

An instructor in a studio begins by setting his pupils at work, by showing them how to see the thing before them, and by informing them as to the means whereby they may reproduce it as best they can. He never begins by chilling their interest with a deadening list of blunders to be avoided. On the contrary, his advice is affirmative always, and he points out their mistakes only as they may arise in the course of their work. A beginner can learn only by doing and by profiting from his own mistakes. He is not likely to make satisfactory progress if he has to start in by memorizing a long catalog of the mistakes he must not make. We found this out a score of years ago here in America; and our manuals of rhetoric are now all affirmative and not negative.

Not only does *The King's English* employ a false method, long ago cast aside in the United States as misleading and wasteful, but it has also another defect equally damaging. Its two compilers have failed to seize and to act upon the more

modern principle that the spoken word must always be considered as underlying the written word. They persist in dealing with the written word as tho that existed by itself, as tho it was primary, and not merely secondary to the spoken word. Language is really alive and really vital only on the lips of men and women, and all that we can capture and confine on paper is but the ghost of the truly living speech.

This is the foundation of all modern study of language and it ought to be the foundation of study of rhetoric. As Professor Skeat has declared, in the paper from which quotation has already been made, this is "the one fruitful idea," this is "the one lesson which is essential." He asserts that "we all need to recall to our minds, from time to time, the elementary fact that all languages are essentially *spoken* languages." And this is the very fact that the compilers of *The King's English* have not recalled to their minds at all;—or at least, it is a fact the bearing of which they have failed to perceive and failed to profit by. And the result of this failure has been to deprive their advice of much of the value it might have had if they had been able to take a broader view of language.

To say this is to suggest that the temper of the book is often pitifully academic, and that its compilers are striving to cage the language within artificial bonds, and to curb the large freedom which it has always had and which gives it much of its force and much of its richness. They reveal a swift willingness to dwell on the petty slips of the masters of English; and they seem to take pleasure in pointing out what they deem blunders in the writings of their betters. They care little for any theory of rhetoric; and yet they have a theory of correctness, the result of an attempt to apply strict logic to a language which never has been logical, because it has the characteristics of the peoples who speak it and who have made it in their own image. The English language is what it is actually, not at all what it ought to be logically, and still less what somebody may think it ought to be.

What the compilers of this book show few signs of understanding is that language is made not by rule but by use, not by scholars in the library alone, but also and mainly by the

people in the workshop and in the market-place. Language is made by those who use it; and it is made by them to suit their own needs and in accord with their own characteristics. Every language must, therefore, have the special characteristics of the race that speaks it, and it resists sturdily the application of rules drawn from the study of other languages having other characteristics, because they were wrought by other races. The rules of Latin and the rules of French are not applicable to English; and any attempt to apply them is certain to be harmful. Latin and French are logical tongues, because the Latins were, and the French are, more or less logical. English is often more or less illogical, because the peoples who speak English are often illogical, and because they have made their own language to suit their own needs. The speakers of English are energetic and practical; and they refuse to allow their speech to be curbed always by analogy or to be haltered always by strict logic. To set up a standard of analogy or of strict logic is to apply to English a method well enough in French but unwise and injurious in our own tongue. And frequent as have been the attempts to schoolmaster our language, the common sense of the plain people has always resisted them successfully.

The compilers of a book of the blunders made by other writers ought to be extraordinarily careful not to lay themselves open to attack; and the compilers of *The King's English* are less vulnerable than the most of those responsible for other volumes dealing with defective English. Yet it would not be difficult for a hypercritic to catalog not a few cases where their style would be open to their own censure. On page 3, for example, we find *further* misused for *farther*; and on page 27 the word *only* is to be found twice out of the place it ought to occupy if we apply strict logic. On page 28 we find a cheaply humorous phrase such as the compilers elsewhere condemn:—"The *Times* writer might have *thrown the handkerchief* to one of them." After discussing sensibly enough the use of foreign words, the compilers are guilty on page 42 of—"in such cases *obsta principiis* is the only hope;" and on page 215 of—"He forgets our *ex officio* perfection in wisdom," and again on the

same page,—“he is not the *corpus vile* on which experiment is made.” And after an intelligent discussion of vulgarisms, it is a little surprising to happen on a term like this on page 199:—“How vexatious these *reach-me-down* archaisms can become,” and so on. It is only proper to point out that the style of *The King's English* is generally workmanlike and free from any of the more offensive Briticisms.

It may be noted that the compilers cite the word “Briticism” only to protest against its formation. The things which the word describes they do not consider at all, altho they bestow several pages on objectionable Americanisms. They seem to be unaware that Briticisms of one kind or another are as abundant as Americanisms of one kind or another; and they do not recognize the fact that the existence of localisms in Great Britain, in the United States, and in all other countries where English is a mother-tongue, may be a benefit to the language, in that these localisms can supply needed new words and phrases as the older words and phrases are worn out by excessive use.

Perhaps it is not to be wondered at that the compilers of a book called *The King's English* should take the insular view that the English language belongs to the British alone instead of being the birthright of all the peoples who speak it, whether in the British Isles, in the United States, or in any other country. Yet they might have recalled Mark Twain's statement that our language is the King's English no longer, since it has been taken over by a stock-company,—and we Americans now hold the majority of the stock. It is hard for the British to perceive that the English language is a precious possession of all who have it as their mother-tongue and that it no longer belongs exclusively to the now outnumbered inhabitants of the island where it was first spoken. This parochial outlook of the compilers, this appeal to a local constituency rather than to the whole body of those who read and write English, this crass ignorance as to American usage,—these things an American cannot help noting with surprise commingled with amusement.

It would be easy to dismiss *The King's English* as an academic curiosity, as a specimen of parochial narrow-mindedness;

but it would not be quite fair. The book has a certain utility of its own. From the point of view which the compilers have chosen to take and accepting the theory according to which they have gone to work, their labors have not been altogether in vain. There is profit to all who are interested in English in being forced to take note of the effect certain locutions produce upon a logical mind. The book is not to be recommended to the student, since it would be likely to mislead him. But it has its value for the experienced teacher who will know how to make due allowance for its obvious defects and who can find his profit in the examples laboriously collected and in the criticisms which accompany them and which are often acute, sensible, and suggestive. The experienced teacher will look in vain for any reference to one of the most frequent of Britishisms, the use of *directly* for *as soon as*; and he will be surprised to find a defense of another Britishism *different to* where logic seems to demand *different from*—which is the accepted American usage. But he will find a host of quotations from a multitude of writers; and he may have his perceptions sharpened, even if he remains in frequent disagreement with the comments which the compilers append to their interesting excerpts.

BRANDER MATTHEWS

COLUMBIA UNIVERSITY

X

NOTES AND NEWS

It is not the habit of the REVIEW to comment editorially on articles that appear in its pages. That habit is departed from in regard to two articles in the present issue, because the writers are in error in regard to important and easily ascertained matters of fact.

Dr. K  chler, in writing about American university training, shows that he has the American colleges and not the American universities in mind. His observations on page 373 make this quite clear. Because of the differences between the twofold system, in Germany, of gymnasium and university, and the threefold system, in the United States, of secondary school, college, and university, he has fallen into complete confusion. With the correctness of Dr. K  chler's opinions we are, of course, not concerned, but his errors of fact are too glaring to pass unnoticed.

Professor Lawton, too, is in serious error in assuming a decay or decline of academic courage. Courage and independence of view have never been so common as now among American college and university teachers. Freedom of speech and of action has become almost a fetish. Perhaps, moreover, the professor was never so influential as now, both inside his institution and outside it as well. A reading of Professor Brander Matthews's notable Phi Beta Kappa oration on "American character" ought to disabuse Professor Lawton's mind of the comic notion that "business, or 'high finance,' the struggle to amass ten, a hundred, a thousand millions, is the only game which a successful American seriously considers, for his sons as for himself." Of the many millions of successful Americans, not many thousands are engaged in the struggle that Professor Lawton describes. The overwhelming majority

are quite content to earn a decent livelihood and to live upright, useful lives.

Professor Lawton must have some very private information about college and university administration to justify his assumption that a college or university president has "absolute control over his associates." We venture to doubt whether such a condition exists in any American institution of higher learning.

The moral of these observations is that interesting and sincere articles are not always accurate.

**Mrs. William
Grey**

Mrs. William Grey, after a long life of useful service to education, is dead at the great age of 90 years. No name is more closely associated than hers with the movement for the higher education of women and girls in England, with the origin and development of which she was so closely connected over thirty years ago. Largely thru Mrs. Grey's personal efforts the Women's Education Union was founded, and it in turn gave rise to the Girls' Public Day School Company. A college for women teachers for secondary schools, known as the Maria Grey Training College, was founded in 1878 in a small way, and has since become an important educational force. Mrs. Grey's personality was very delightful, and in her advanced years she suffered no abatement of her enthusiasm for women's education. Her sister and constant associate in all her educational undertakings, Miss Emily Shirreff, died in 1897. With the death of Mrs. Grey an epoch in the history of women's education is closed, and her name will long be held in affectionate remembrance and honor.

EDUCATIONAL REVIEW

DECEMBER, 1906

I

IMPRESSIONS OF GERMAN UNIVERSITIES

The Editor of the EDUCATIONAL REVIEW has asked me to give my impressions of the German Universities. For three reasons I do so with hesitation.

In the first place, it is difficult to get impressions of foreign universities that are broad enough and accurate enough to be worth publishing. Our American universities expect visits from people interested in higher education, but the Germans assume that you are interested in nothing except special work. This makes it difficult to see accurately even one of their universities. In Munich, where the first semester of my sabbatical year (1905-6) was spent, difficulties and suspicious looks beset my journeys everywhere among institutions of higher learning. It required full explanation to overcome the aversion to show things. In Berlin, where the second semester was spent, I applied immediately to the Minister of Education for a general letter of introduction. This letter his Excellency gave me with charming politeness; and he was good enough of his own accord to write to heads of institutions, saying that a visit from me might be expected. Did not the fact that he wrote these additional letters show a fear that difficulties might arise? Verily, verily, it is difficult to see thoroly any German university, and few Americans do it.

Then, while I have visited several universities, I have inspected carefully only two—that at Munich and that at Berlin. That at Leipzig I examined with some care twenty years ago; but living then in the South and feeling that the general problem

there was secondary education, I inspected thoroly secondary schools, confining my examination of the university chiefly to the classics, in which my heart was then bound up.

In the third place, the writer is not wise enough to understand thoroly a great university. He did not indeed go to Germany without some experience. He had been instructor in a fitting school, principal of a high school, dean of a college, Professor of Latin in Tulane University, and President of the University of Missouri. He had spent a part of 1885 in Leipzig, and in 1890 had inspected with some care the English and Scotch universities. For fifteen years he had embraced every opportunity of increasing in extent and in accuracy his knowledge of seats of learning in America—north, south, east, and west. He had letters from eminent men. With this experience, and at the age of fifty-two, he matriculated at Munich for sixteen lectures a week, and the following fall for the same number at Berlin. The lectures were attended in exemplary fashion, but there was yet time for inspection, especially in Berlin, where all the lectures came in the afternoon. In comparison with some men, who talk glibly of such things, the writer had qualifications for examining; but, in comparison with what was necessary, his qualifications were slender.

Twenty years ago, by accurate calculation, I found the average age of the graduating class in the Royal Gymnasium at Leipzig to be 20 1-2 years. My colleague, Professor Henry J. Waters, in the winter of 1905, found the average age of a large number of German students in their first year at the University of Leipzig to be between 20 and 21. Probably this is close to the average for all Germany. If this is true, and if the beginning of the junior year represents the corresponding stage of advancement among us, then the Germans make better time intellectually in the first twenty years of life, and thereby have the advantage over us.

Americans often speak of the lack of equipment in German institutions of higher learning. Those in Munich, Berlin, and Leipzig, at least, are splendidly equipped. For example, in Munich the Director of the Engineering School showed me "a little addition to the chemical laboratory." This institution

with us would have been but a department of a university; yet that "little addition" to its chemical laboratory had cost \$250,000. In Berlin they are erecting on a square of ground a building to contain the books of the Royal Library and those of the University. The total cost is to be about \$7,500,000. The only place in which I found obvious lack of equipment was in the laboratory of botany at Berlin; but even there one found good facilities for instruction in the Botanical Garden. Moreover, the rooms of this laboratory in town, inadequate as they were, showed the utmost ingenuity in overcoming obstacles arising from smoke, dust, fog, and small windows. Whatever may have been true in the past, and whatever may be true now in smaller seats of learning, those in Munich, Berlin, and Leipzig, at least, are admirably equipped.

The impression seems to prevail that all German professors are poorly paid. Most of them are, but not all. Each gets a fixed salary and in addition thereto the fees of the students that study under him personally. This makes for a few men princely salaries. At the head of the list stands, perhaps, Professor Waldeyer, the famous anatomist at Berlin, whose official income is variously estimated at from \$15,000 to \$20,000. It is credibly reported that at Berlin a new rule has been adopted to go into effect this year. Under this rule the professor gets his fees up to a certain amount, and thereafter only a percentage of them. In spite of a princely income here and there, German professors generally receive less money, in my opinion, than their American colleagues usually do.

It is astounding how much faith the Germans put in lecturing as a means of instruction. Now every institution of learning has lectures, but the Germans show a faith in them not to be found everywhere. Some years ago, in a little group of Johns Hopkins men in Baltimore, a gentleman jestingly asked a great scientist how many times a week he lectured. His reply was, "I have lectured four times during the present session." It was then the month of May. When some surprise was expressed, he added "and I am wondering why I lectured those four times." Where instruction is given by lectures alone, sections of classes are not necessary. The

breaking into sections means more teachers, and where means are limited, poorer teachers; but it also means for students harder work and closer contact with teachers. In Germany I heard lectures sometimes with five hundred or six hundred other men in the room. There was nothing in the method of instruction specially provocative of collateral reading or regular attendance. Their method is less expensive—ours is better, in theory at least; but the necessity of providing out of limited resources more teachers forces us to employ some men of less experience, learning, and dignity. If the quality of our instructors improves sufficiently, the advantage will be ultimately on our side; otherwise, it will remain on the German side. I know full well that they have *privat-docenten*. The tendency at least is to assign them nooks and corners, leaving the broad fields of learning to the professors. In my opinion, *privat-docenten* do not play so conspicuous a part in the German universities as instructors do with us.

Let me call attention to the superior way in which lectures on scientific subjects are often illustrated by the Germans. No way appears for comparing them in this respect with ourselves, but I fear that here they are ahead of us. This brings me close to a remark—dangerous for any man to make—that American men of science, generally—not universally—are excessive in their devotion to the laboratory. The Germans, too, may sin, peradventure, in this respect, but their sins are not so scarlet as ours are. Now every man above the condition of fool knows the value of laboratories. They are indispensable to scientific work. You could not have a university without them. Men who expect to devote themselves to science must bury themselves in laboratories. There is no other way. But much valuable instruction can be given in science by lectures alone and to those who will not work in laboratories. This is recognized to some extent everywhere, but in Germany the recognition is, I fear, much wider and deeper and fuller than it is now in America. Many men desire to learn something of science for deepening culture and widening philosophic outlook, without being willing to burrow in laboratories. Such men come nearer in Germany to getting

their desires. And why should not such men find in every large university in our land, in every fundamental science, one lecture course at least with philosophic outlook and with abundant illustrations, but without laboratory work? Think of the value of such courses from men like Agassiz, William B. Rogers, David Starr Jordan, and others! The worst enemies of the laboratory are the men that in the last twenty-five years have pushed it too far. Even our children learn in school little of living plants by nurture and observation—little of the animal kingdom without slaughter and dissection. Zoology and botany come to them mainly by tearing things to pieces.

And in this connection, let me say that wherever in a seat of learning in Germany you find a laboratory, you find in the same building a museum and a department library. The three form a trinity in science that, so far as I know, is never broken. Sometimes, indeed, when there is a superb library or museum within a very short distance, they dispense with the department library or the museum; but otherwise, never. In this the German is right—eminently right. And here again, in regard to the value of museums, the worship of the laboratory has in late years led some of us astray.

Another impression of great distinctness was this—that in America, a democratic country, universities tend toward absolutism in their government; while in Germany, a land of royalty, they are homes of democracy. What has been said refers to the power of the Rector or President. In Germany he has too little power, while in America he has generally too much. But the authority of the university over the students is exercised more imperiously there than it is here. Their requirements are few, but they are also absolute. Moreover, the professor in his bearing towards the students generally is more lordly than he is on our side; and yet, where students do get near to him there, they get nearer than they do in America.

The German universities seem to lack "college spirit." Literature shows that their writers sometimes look back upon university days as upon a halcyon period of life; but this loving backward glance is rather towards a bygone condition and

towards great teachers than towards an Alma Mater. In our land it is doubtful whether love for state, or for country, or for both, is so strong as love for Alma Mater in the graduates of some universities on the Atlantic Coast; and this college spirit is spreading westward over the whole continent. It is for us an element of superiority. One cause of their deficiency is the German habit of wandering from one seat of learning to another. These pilgrimages, while productive of some good results, are destructive of college spirit. And their universities have no dormitories, which, as every one knows, are the best nurseries of college spirit. Even if they lodge only a fourth of your students, they nevertheless introduce an element that comes in no other way. Moreover, neither in Berlin nor in Munich has the university any campus. This, perhaps, is unavoidable for any institution situated in the heart of a great city. Such situation brings some advantages, but it does not breed college spirit. On the other hand, German students look back to the great professors under whom they have studied, with deeper reverence than we generally find in America. What is college spirit and love for Alma Mater here, often blooms there as retrospect of self-centered men and as reverence for great teachers. Moreover, college spirit among us is bred in the undergraduate—it is not conspicuous in the graduate student. So let us not glory too much.

As everybody knows, the German universities make no provision for athletics. This again is a mistake which we have avoided. It is difficult to over-estimate the value of athletics in cultivating college spirit and in checking sensual tendencies. The caviler will call attention to their clubs for boating, fencing, drinking, and so on. Undoubtedly one does find athletics in German universities, but such matters are left to the students; whereas here the universities themselves foster athletics sedulously. We put a higher premium on these sports than the Germans do, and in this we are right. I saw two student duels one afternoon. Altho accustomed to the superb fencing with the small sword that one sees in New Orleans, I expected to have my breath taken away by an exhibition of strength, skill, endurance, and hardihood. But these duels were stupid.

From no point of view were they admirable. I did not attend any *kneipes*. They become finally, I am told, a test of abdominal endurance, and so might be called, perhaps, a vulgar sort of athletics.

Some Americans seem to think that all the work in German universities is graduate in character. This is far from being true. Their own students are not admitted until they have finished the course in a secondary school of admirable quality. Most of my friends declare that this preparation is equivalent to our high school plus the freshman and sophomore years at a good college. I myself believe that the full course in the gymnasium (and in that alone) is equivalent to half the junior year also, if not indeed to all of it. But the gymnasium is not the only kind of secondary school. Perhaps in the classics and in subjects closely related thereto, all, or nearly all, the work offered in the German universities might fairly be called graduate; but in history (mediæval and modern), mathematics, economics, sociology, statistics, philosophy, modern languages, in all the sciences, and in other things also, a multitude of lectures are delivered that do not imply any considerable attainment on the part of the hearers. Yet men of the highest attainments may find illumination; for great scholars always illuminate, even when they are discussing the elements of a subject. Of course many lectures are delivered that do imply large attainments in the hearers. In American universities, the candidate for the Doctor's degree is compelled to devote generally three years to graduate work after taking his A. B. degree. This means four years after the junior, or five years after the sophomore year; whereas the German can get his degree in three years after he leaves the secondary school. Certainly in the two best American universities the struggle for the Ph. D. degree (except perhaps in the classics alone) is longer, and higher, and harder than it is at Berlin or Munich. But are we on this account better? I think not. In this respect, the advantage is, in my opinion, with the German. The struggle for preparation should not be unreasonably protracted. Thank Heaven, it is shorter in Europe. Moreover, the American who gets his degree in this country alone loses

the advantages of travel and residence in a foreign land. In Germany the requirements for admission to all departments of the university are the same. This means that for their professional schools also they demand a secondary education which is about equivalent to our high school course plus the freshman and sophomore years of the college; and in the case of the gymnasium, it is equivalent, furthermore, in my opinion, to half our junior year and possibly to the whole of it. It is as if we should require the completion of the freshman and sophomore years of the college before admitting students to our professional departments. In this respect the Germans are right. To require the degree of A. B. or B. S. before admitting a student to a professional school is to prolong too late in life the period of preparation; and to admit upon the high school diploma alone is to degrade the professional schools. Happily some of our universities offer combined courses, leading in six years to an academic and to a professional degree.

The fact that German universities take little care of their students except in regard to intellectual life, is known everywhere. Nevertheless, let me write briefly about it. I had supposed that this failure of theirs arose partly out of tradition and partly out of necessity; but all the teachers with whom I spoke maintained with apparent sincerity that it was the making of a young man to take him at about twenty from his home and his schoolmaster and plant him in the bosom of a university, a stranger, without friends, without counselors, to choose the good or the bad as might seem to him proper. They claimed that nothing in their educational system did more to develop in a man independence, experience, and the elements of righteousness. In *Pickwick papers* Mr. Weller boasts of the care that he had exercised in the education of Sam: the climax of this care was that he had let Sam sleep out nights. Is not Weller a German name? With us, some money and some energy have been expended and are expended annually in building on the campus highways towards righteousness, and in choking by-paths towards wickedness. Our best American universities reduce to a minimum control of students, but without abandoning guidance and persuasion. The German uni-

versity itself does not spend a moment of time nor a cent of money on these things, and thanks God that it does not! The student goes to lectures or elsewhere, studies or idles, behaves or misbehaves, as he pleases, so long as he stops short of crime. Verily he enjoys a freedom that never came to him before, that never will come again, and that, in my opinion, should never come to any man at any time. Their students, as they go along, might easily learn more that is socially, morally, physically, and religiously profitable. Ours do this without having reached yet their utmost. And yet far be it from me to praise too highly in this respect my own people. The noble undertaking of lifting to the highest the social, moral, and religious life of the students, we leave too often, if not, indeed, generally, to the voluntary activities of students, teachers, and officers—just as athletics are cared for by the Germans, but not as athletics are cared for by us. It is a shame that every university—possibly some of them already do it—does not have on good salary one layman at least with a head full of common sense, a heart full of righteousness, slightly connected with teaching, but really free for efforts to raise to the highest the life of the students. He ought to be capable of moving, like pawns on a chess board, the Y. M. C. A., local churches, the fraternities, the University Club, the president, the deans, the teachers, the athletic association, and every other power in the community. Such a man, giving a course of (say) three hours a week in ethics or sociology, and the rest of his time to this work, could accomplish much. As his work grows, he ought to have assistants. I am pleading that this service receive recognition commensurate with that which we justly give to athletics.

In the larger German universities, in some subjects at least, strangulation is upon the seminars. The fundamental idea of the seminar disappears when its membership reaches one hundred and fifty or two hundred. The graduate departments of our two best American universities are still small enough (thank Heaven!) to escape this strangulation. May it be averted when numbers grow greater, by the multiplication of great teachers!

To an American it seems strange that the German universities should consist of only four departments: philosophy, theology, law, medicine; while to the German it must seem strange to find here universities without theology. The wonder is justifiable on either side. So much thought has been given to theology for centuries that no man can afford to sniff at it, whether he specially craves it for himself or not. No university is complete without it. The lack of it in our universities is painful. Our state institutions cannot possibly use for this instruction public money; but it is earnestly to be hoped that ere long wealthy men will endow in them departments of theology. On the other hand, there is no reason why a university may not have departments of engineering, commerce, agriculture, education, art, music, and so on. In a quarter of a century there may be reasons for creating faculties that we little dream of now. The idea of limiting a university to any fixed number of departments seems to me absurd.

The old notion that the German professors drink to excess, seems to be wrong. So far as my observation goes, they live temperate and (in the main) exemplary lives. Their intemperance is chiefly in hard work.

One beautiful trait of Herr Professor is his devotion to the institution in which he serves. Berlin, the greatest university in Europe, perhaps in the world, the special pride of the Kaiser, with immense resources, preys frequently upon the smaller institutions of the Fatherland; yet a number of cases could be cited in which men, celebrated in their subjects—men in smaller universities, like Prague, Zurich, Göttingen, Halle, and so on—have turned a deaf ear to flattering and lucrative calls from Berlin. Increase in salary will lead Americans too often anywhere.

Perhaps the greatest difference between the German and the American universities is in the age of the professors, as will be seen from the table which follows.

The difference between the best and the poorest university in Germany is not very great, for the poorest is good in quality; whereas, in America, the difference between the best and the poorest is enormous. In this the advantage is not with us.

BERLIN				MUNICH				LEIPZIG			
Between		Per cent.		Between		Per cent.		Between		Per cent.	
30 and 35	0	0		30 and 35	0	0		30 and 35	0	0	
35 "	40	0	0	35 "	40	5	8.20	35 "	40	2	2.70
40 "	45	10	9.35	40 "	45	6	9.84	40 "	45	7	9.46
45 "	50	10	9.35	45 "	50	7	11.48	45 "	50	8	10.81
50 "	55	14	13.08	50 "	55	16	26.23	50 "	55	10	13.51
55 "	60	21	19.63	55 "	60	8	13.11	55 "	60	14	18.92
60 "	65	15	14.02	60 "	65	11	18.03	60 "	65	17	22.97
65 "	70	20	18.69	65 "	70	1	1.64	65 "	70	6	8.11
70 "	75	9	8.41	70 "	75	5	8.20	70 "	75	6	8.11
75 "	80	5	4.67	75 "	80	2	3.20	75 "	80	3	4.05
Over	80	3	2.80	Over	80	0		Over	80	1	1.35
107		100.00		61		100.01		74		99.99	
Average age 60				Average age 55				Average age 58			

VIENNA				ZURICH				PRAGUE			
Between		Per cent.		Between		Per cent.		Between		Per cent.	
30 and 35	0	0		30 and 35	0	0		30 and 35	0	0	
35 "	40	4	3.85	35 "	40	1	3.03	35 "	40	2	3.08
40 "	45	5	4.81	40 "	45	4	12.12	40 "	45	7	10.77
45 "	50	20	19.23	45 "	50	5	15.15	45 "	50	11	16.92
50 "	55	14	13.45	50 "	55	7	21.21	50 "	55	12	18.46
55 "	60	17	16.35	55 "	60	10	30.30	55 "	60	13	20.00
60 "	65	13	12.50	60 "	65	4	12.12	60 "	65	6	9.23
65 "	70	16	15.38	65 "	70	2	6.06	65 "	70	8	12.31
70 "	75	9	8.65	70 "	75	0	00	70 "	75	4	6.15
75 "	80	4	3.85	75 "	80	0	00	75 "	80	2	3.08
Over	80	2	1.92	Over	80	0	00	Over	80	0	00
104		100.00		33		99.99		65		100.00	
Average age 58				Average age 58				Average age 47			

CHRISTIANIA				SUMMARY			
Between		Per cent.		Between			
30 and 35	0	0		30 and 35	0		
35 "	40	6	15.38	35 "	40	20	
40 "	45	4	10.25	40 "	45	43	
45 "	50	6	15.38	45 "	50	67	
50 "	55	8	20.00	50 "	55	81	
55 "	60	4	10.25	55 "	60	87	
60 "	65	4	10.25	60 "	65	76	
65 "	70	2	5.13	65 "	70	55	
70 "	75	4	10.25	70 "	75	37	
75 "	80	0	0	75 "	80	20	
Over	80	1	2.56	Over	80	7	
39		99.95		493			
Average age 53				Number of Professors 493			
				Average age 55			

Compiled from der deutsche Universitäts-Kalender, Scheffer u. Zieler, 1905, and including all full professors (Ordentliche Professoren) that were offering courses at that time. This interesting table was compiled by my friend and colleague, Professor Henry J. Waters.

But let the reader keep in mind the two best American universities as he reads my words about Munich and Berlin. For

the Ph. D. degree our requirements—except perhaps in the classics—are greater in quantity and in quality. Some who prize highly their foreign degrees may dispute this, but the fact is as has been said. In my opinion we require more than is wise. For entrance to their professional schools the Germans require at least two years more than graduation from our best high schools means. At Munich and Berlin you will not find in the faculties a single man that does not measure intellectually up to a certain goodly height; whereas, in our best universities you will find some that do not reach the same height. Because of these facts, and not because of any disparity between the best men on either side, I think that, on the whole, the advantage in intellectual quality is still in some degree on the side of the Germans. Our two best American universities have still some relics of the past, when standards were not so high as they are now. In fifteen years, with some gracious assistance from Death, there will be, in my opinion, more than two American universities unsurpassed in things intellectual by any institution on earth; and in all other respects preëminent—in organization and management, in college spirit, morals, manners, social life, athletics, manliness, religion. In fact, unless the Europeans change radically some of their ideas and methods, they cannot expect finally to compete with our best universities.

For fifty years we have been copying in higher education the Germans, but it seems to me that we have been marvelously guided, in general, in adopting what is good and in avoiding what is bad. We have never yet lost our good old English notion that a university is a place for other things besides intellectual exercise. That in truth is its chief function, but other things also are of importance. For the good sense of our forefathers and elder brothers let us thank Heaven fervently, praying that we also may be guided aright.

R. H. JESSE

UNIVERSITY OF MISSOURI

II

THE VILLAGE AND THE VILLAGE SCHOOL ¹

I have before this more than once publicly expressed my gratitude to the village school of my early home in North Friesland, to which, next to my mother, I owe the first elements of mental culture; that need not hinder me, however, from taking the opportunity offered me to repeat the expression, and at the same time to utter my conviction that the right kind of village, the right kind of farm-home, and the right kind of rural school, unite to form the most perfect place of education to be found on God's earth for the years of childhood and boyhood. This rural domain offers all the possibilities of culture in the form in which the child needs them and can use them for the development of its bodily and mental powers. It places the child in the midst of a real world which his powers can grasp; a real world which not only invites him to look and see, but also challenges him to grasp and handle, and so in the way most effective for children,—and perhaps for all,—gain actual acquaintance with the real world. In comparison with this what has the city to offer? On the one hand, the poverty and meagerness of the "flat,"—filled tho it may be with all the finery which the new "national wealth" showers upon us; on the other hand, an immense confusion of artificial, complicated, incomprehensible things, railroads and telephones, department stores and show windows, all of which the eye of the child sees as in a mist from afar.

It has been maintained that the child must be conducted thru an abbreviated recapitulation of the epochs of civilization thru which the race has passed. So be it; then must the first step be to take him out of the city into the country, and let

¹ Translated, with the author's permission, by Edward O. Sisson of the University of Washington, from *Die Dorfschule*.

him live and work with farmers and herdsmen, shepherds and fishermen. Here alone is the opportunity to know nature and man in all his elementary activities, digging and plowing, sowing and reaping, carpentry and smithing, baking and weaving, hunting the wild beast and tending the tame. The first Utopia, of Thomas More, who saw but the beginnings of modern city life, ordains that the young Utopians shall grow up in the country; the city is not really for life at all, but merely a temporary abiding place for labor and business. So does Locke praise the farm-house as the place for the best education, and Rousseau brings his *Émile* to the country and lets him wrestle with the village lads. Goethe also, in the *Pedagogical province*, puts the boy in the midst of nature and among the natural and original activities of the race, that he may there develop the powers with which he may later grasp and control the more complicated relations and tasks of the larger spheres of life.

No doubt these are utopias. We cannot remove the youth from the conditions into which they are born. So much happier, then, will those esteem themselves to whom destiny has granted the utopian ideal without their striving for it.—At least so should it be; but there are many who feel quite otherwise. Truly the children themselves do not press into the city; but the parents and teachers, how many of them despise what they have, and look with longing toward the city, as the abode of culture and good fortune, ready at any moment, upon the slightest pretext or without pretext, to abandon the paradise of youth and transplant themselves and their children into the stony desert of a great city. To make such people aware what they possess would, it seems to me, be one of the first and finest tasks of this journal.

From the abundance of youthful memories I choose one or two items. Above all, the life, from infancy up, in and with nature, in summer and winter, by day and night: earth and sky, marsh and swamp, pasture and meadow, plow land and heath, dike and moor, dunes and flat land, with all that grows and lives upon them, plants and animals both wild and tame: a boundless world, and yet so familiar thru daily intercourse,

so intimately known, that it seemed part and parcel of one's own life. Against this what is the picture book of the city child, his zoological garden and "nature study"? To him Nature speaks thru books and paper, specimens and skeletons, or rather she herself does not speak at all, but only a pale shadowy copy, a ghostly abstraction. Instead of the things the pictures, instead of reality formulas, hearsay, and parrot repetition; when he does get a glimpse of reality it is thru bars and fences: the lion in the zoological garden and the green turf in the park, spears and muskets in the arsenal, flowers and fruit trees in gardens fenced with barb-wire: everything is hedged about and cries to him: Hands off! Stand back!

"Thou shalt abstain—renounce—refrain!
Such is the everlasting song
That in the ears of all men rings,—
That unrelieved, our whole life long,
Each hour in passing hoarsely sings."²

So it is with the poor city children. How different the lot of the village lads: the whole wide world stands open to them. Even now I can see our little band, on a blustering April day, our cheeks reddened by the keen east wind, as we course over the damp gray stubble fields, hunting the gray-brown mottled eggs which the pewee has laid upon the bare ground, and which it now defends with shrill cries, flying almost in our very faces. Or again, how on a hot summer day we roam over the heath, seeking blackberries and raspberries. Then at mowing time, how we sought out the nests of the "bumble bees," and not without many a painful sting captured the sweet booty. Or how, in the sultry noon we stole along the ditches and caught the pike that lay, dreaming and half insensible in the sun,—we stealthily slipped our horse-hair nooses over their heads and then with a sudden jerk brought the fish to land. Or how we dammed up the water of a brook and compelled it to drive our mills. Or how with expert eye we cut willows for bows and for arrows pointed strong reeds which we drew from the thatch of the house. Or how in autumn we kindled fires in the fields and baked potatoes in the ashes; flint and steel and

² *Faust*, Act II. Sc. iv. Trans. by Bayard Taylor, Boston, 1871.

touchwood we always carried in our pockets; and we knew too how to use the burning-glass; the sun-dial also, made of adjustable rings, was part of our equipment. Or how in winter we built and defended snow castles, or glided on our skates mile after mile over the flooded and frozen fields.

Nor was the world of night less familiar to us than that of day. It is June, and the house is astir at two in the morning; the first glimmerings of dawn are beginning, when we make our way to the outer dike; the thick, short, bluish-green salt-grass that grows upon the wave-built shore-lands can be mown only in the early morning when it is moist with the dew. The boys are there too; when there is no work for them to do they search for mussels and strange sea plants or catch the shy crabs, whose circling sidelong gait is so odd and amusing. At another time an approaching storm rouses the sleepers from their beds; the heavens are wrapped in flame, the thunder rattles in rapid peals; at last, down comes the rain; thank God, the worst is over. We go out and look around the house: there in the distance is the bright gleam of fire; a farm-house has been struck and is burning helplessly to the ground; we can see the thatched roof shoot down in flame and the timbers collapse in fiery ruins.

And as we thus share the life of the great world of nature, in its mild and gentle processes and in its fury and destruction, so too we share the activity of the smaller world of humanity. As soon as the lad is five or six years old he has his little part in the work of the farm. He finds his way as messenger to all the fields and houses, first in the immediate neighborhood and later in the neighboring villages. Soon he can do real work; from my seventh and eighth year on I had my share in all the farm work, plowing and harrowing, haymaking and harvest; countless are the wagonloads of hay and grain which I have loaded with expert hand, many the long July days in which I have helped with the mowing and gathering of the hay in the more distant meadows, from early dawn till the dusk of evening,—in memory the brightest days of life. There was besides the garden to tend, to plant and water; nor did there fail times when the boy's hand could be used in feeding

and watering the cattle, or even in the more domestic duties of baking and cooking. In short, the lad grew naturally into a practical acquaintance with the varied forms of human labor. Besides all this, there came to the house two or three times a year the carpenter and the mason; the tailor, too, with his apprentice, spent a day or two at least once in the year, working with needle and thread on the big table. Trips to the shoemaker's were of frequent occurrence; and we loved to look in upon the smith; he was a jolly fellow, and in winter, as we came from afternoon school and the sparks flying from the anvil shed a magic gleam over the dark smithy, we found it hard to pass by without going in a while and warming our hands at the glowing fire.

Thus was the great world before us in miniature, a genuine *universitas artium humanarum*.

Then in the country the people themselves and their circumstances of life are familiarly known to the boy. In the city one does not even know his next neighbor; crowded together, separated perhaps only by a thin partition or a ceiling, still they live far apart, in a dim and nameless obscurity, so that they scarcely are aware of the life or death of their neighbors. In the country, on the contrary, every house lies open, every family, with all its life and history, from the grandparents to the grandchildren and great-grandchildren, is known to all, with its poverty or riches, its fortune and misfortune, strength and weakness, virtues and vices. The inner connection of human affairs, the necessary relation between character and destiny, between conduct and welfare, all this offers itself to every eye, a school of the knowledge of human nature and fate such as is denied to him who grows up in the city: how many city boys know anything of the parents and home circle even of their mates in school and playground?

With all this wealth and plenty is combined on another side a not less fortunate poverty. No huge toyshop, from which toys may be bought ready to hand; who would have toys, must make them himself, the girl her doll and neatly embroidered ball, the boy the sling and bow. The mill and cart, the kite and the ship,—all with hundredfold pleasure, first in devising

and making, and then because it "works." And if it failed, it only meant that a new one must be made better than the first. I even made my first chess men and board, out of linden wood with the aid of sealing-wax and ink; I learned the rules of the game in two or three hours from a visitor from the city; when he was gone I cut the figures out and taught a comrade what I knew; we played with these figures almost every evening for a whole winter, and became, tho quite untaught, players of no mean skill.

Likewise there was no great bookstore, from which generous or dutiful uncles and aunts brought home all kinds of books for the ripe or unripe youth. Beside the schoolbooks and the Bible, the latter a much-used reading book, the house contained only a few books of history and geography, and a few rolled maps, dating back into the seventeenth century; these had no doubt been used by seafaring ancestors; I have spent many an hour with them, comparing book and map, and copying the latter by hand. Great was our hunger for more; when one of my comrades got an atlas I sought him out many a time for the sake of seeing the treasure; and when I finally got an atlas of my own, my joy in the new possession—I have the book yet—was beyond all bounds.

Consider in contrast with this the situation of the city child: he suffers under a very burden of superfluity, even when his parents are in moderate circumstances. A store of playthings and a very library of reading books of all sorts puts him into a daily perplexity of choice. Tired of the toys he wantonly spoils them, and so makes them into cause of new vexation. Dozens and even hundreds of books are begun and sometimes read thru; the chase after the adventurous, the amusing, and perhaps the spicy, commences, and soon corrupts the taste, and much reading without thought ruins the memory. The imagination is stifled by the mass of passively absorbed matter, the faculty of independent thought is crippled by habits of mental inactivity. In my own case, for years a child's edition of *Robinson Crusoe* was my only story book, which I read over and over again, and as often repeated to the servants.

And now a word as to the village school. It also reaps the

benefit of these conditions. There are no doubt many difficulties in its way,—overcrowded classes, lack of proper grading, short and interrupted attendance, the depressing influence of poverty, not to speak of other privations; still the village school has its points of vantage over the city school. I mention first the countless points of connection furnished by the natural object lessons which the environment itself provides. The stories of the Old and New Testaments, the parables, which spring from a like environment, the birds of the heavens and the lilies of the field, the sower and the tares in the wheat, all find ready comprehension in the mind of the country-bred child.

So in arithmetic: our old arithmetic books contained many problems which were not mere abstract calculation, but concrete cases to be seen in daily life, the hundredweight of butter, the stone of flax, or the butchered swine, how the mother reckoned its weight at home,—such examples were frequent, also those of the leasing of a meadow with the oxen bought in the spring and sold again in the autumn, or the case of the division of an inherited farmstead. In such cases it goes without saying that we reckoned the area, and when necessary extracted square and cube roots with the decimals called for; in the upper classes the Pythagorean theorem was as little a mystery to us as was the algebraic use of letters in computation. And those were the days when in Prussia the school regulations of Stiehl proclaimed the use of decimals to be beyond the horizon even of the teachers of the rural schools! I well remember how with a schoolmate,—who, by the way, was an inmate of the poorhouse, whither the numerous family had been compelled to go upon the death of the father, a mechanic,—I puzzled over the strange fact that minus times minus gave plus. And above all the mental arithmetic: our excellent teacher—I mention his name with gratitude, Sönke Brodersen of Bargum—had the art of making this lesson into an hour of delight and eager rivalry in solving the riddles propounded: he who got the answer first was allowed to explain before the class, and took pride in showing by what arts and dodges he had as it were tricked the very numbers them-

selves, so as to spare mechanical computation and mere memory.

A simple instruction in the elements of physics likewise enjoyed the benefit of many points of connection with the daily observation and activity of the boy. I still remember vividly how the doctrine of the lever and the balance was explained to us; I tested it with apparatus of my own make, using chestnut husks and peas for the scales. Another time we had been taught the siphon; now, thought I, I must test that too. But how get a siphon? There was not such a thing as a rubber tube in the whole village, indeed I suppose it could not have been found in those days in the neighboring town; one could not even get a bent glass tube. So I hit upon the idea of using the long hollow stems of the dandelions which grew about the house; they were bent into the required form, and lo, I had my siphon, with which I drew off many a pail of water. Thus is want a source of riches, by stimulating invention and self-help. I gained more from this instruction in physics than does many a one from the most scientific teaching aided by abundant and costly apparatus.

These examples may show what wealth of opportunity is to be found in the right sort of village life. I do not hesitate to assert that no university offers to its students in greater perfection what they need, than do a village and a good village school offer to the growing boy what he needs and what he can master and turn into real power of knowledge and action. And I cannot but believe that our people suffer a great loss in power and originality of culture when a constantly increasing proportion of the youth grow up in the city without contact with the earth, lacking the deep intuitions of nature and of the conditions of human life which are gained by the country child as a priceless and lasting possession. Over against these mental possessions what is the value of that burden of abstract ideas gathered in the classroom or from the dull and sluggish perusal of books and papers?

May those who still possess this good fortune learn to prize it at its true worth!

FRIEDRICH PAULSEN

BERLIN, GERMANY

III

RELIGION AND PUBLIC EDUCATION

A LETTER TO A FRIEND

MY DEAR FRIEND:

I have yours of the 18th, with the clipping from what you correctly describe as one of the most representative denominational papers of this country—the article being an attack upon state schools and public education. I have read the article, with much interest—altho I have read a hundred such things, much better things, in the last twenty-five years. There is some truth in it—considerably less than a half truth, however—but there is very much about it that is exceedingly specious and very much more that is based on an entire misconception of modern university life.

Against the greater part of this I would put immediately the remark made to me yesterday by the pastor of a well-known—— church of this city: “I have just come from Ann Arbor. There are six hundred students at Ann Arbor who are known to be either members of our Church or affiliated with it thru their families. This is a larger number of young men of the college grade than can be found in any denominational college say in Ohio, and is probably a larger number than can be found in any college of our denomination in the United States. I mean, students of the true college grade. How absurd it is for some members of our church to ignore this, or to object to an organized attempt being made by our church to reach these young men while they are in the universities.”

I am going to run thru this article briefly in order that you may have once for all the benefit (if there is any benefit in it) of my experience and observation and careful thought.

It is undoubtedly true, as the writer says, that “religious and moral instruction is one of the most important elements in a good education.” When he adds that “western State uni-

versities," and the common and high schools, "cannot furnish this element," he adds that which is absolutely false. They not only can furnish it but they do furnish it. In the first place he would not himself deny that they furnish *moral* instruction—at least he ought not to be so foolish as to deny that: but in his first paragraph he includes moral instruction—tho he omits this in his second, yet intends to make the casual reader believe that the second is conditioned upon the first. I am not going to stop a moment to discuss moral education in the public schools. They are full of it—from bottom to top. A very large number of most important moral precepts are constantly inculcated, and the strongest moral characteristics are quickened and strengthened by all forms of this training.

Compulsory "religion"

When it comes to religious instruction—the writer states that the constitutions of the several states will not allow the public schools or the State universities "to employ any teacher of religion." In the first place, he is doing as so many do—confusing religion with denominationalism and ecclesiasticism, which you yourself have learned is a very narrow view of this great subject. In the second place, the burden of his thought seems to be, as usual, that there is no "religion" taught because (chiefly) students in State universities are not obliged to attend prayers. This is the one point almost always singled out by those who attack the "religion," or want of "religion," in public educational institutions.

Now the simple fact is that certain habits of mind, and possibly of thought—certainly of temper and attitude—can be secured in the very young by compulsion. By the constant exercise of authority you can train the child, before he has reached the thinking age, into a large number of very correct and desirable habits of thought and action, and even into very desirable attitudes of mind and temper. But the possibilities of this kind of training become fewer and fewer as the child becomes more mature: and the men who are wisest in education and strongest in true religion always confess that when a person has reached the age of say eighteen and has begun to

put himself consciously in definite personal relations with the world of thought and action, relations for which he is assuming and must assume personal responsibility, compulsion ceases to be helpful. I can take my little boy by the hand with me to church, and can easily believe that a large amount of good will come to him by the constant taking and thru the impressions which he receives while in his place at service. But I cannot believe that the same results, or any appreciable favorable results, attend the compulsory presence of persons of eighteen years of age and upwards in a place of worship. Their attitude of mind, their moral and spiritual temper, has either been settled long before this or will not be settled in this way. The contrary theory is the cardinal error made by all those who still favor compulsion for those who are mature. Those who write seriously of this kind of compulsion in connection with higher spiritual education are either judging of all higher education from the standpoint of the small college to which *boys* were sent in past years, and have little or no comprehension of the life of the larger educational institutions to which young *men* go in these days: or they are certainly narrow-minded, exceedingly unphilosophical, and utterly without sound educational training and sound educational thought.

"Christianity in the classroom"

The talk which is so very common with some such people about the possibility of exerting direct and positive "Christian influence"—other than that of personal character—in connection with classroom work has always seemed to me exceedingly absurd. There is no such thing as a Methodist trigonometry, or a Presbyterian algebra, or an Episcopalian physics, or a Baptist chemistry. It is just as impossible to conceive of such a thing as it would be impossible to conceive of a Methodist carpenter shop, or a Baptist machine shop. In the more than twenty years that I was connected with State universities I never knew of a well-authenticated case of any instructor's bringing outside matter—such as theology or denominationalism or "religion" or "skepticism," as these people use the words—into the classroom, in any unpleasant or un-

favorable way. There is no more skepticism to be found—there is no more skepticism possible—in the sound teaching of Greek and Latin and history and economics and science at the State university than in the college. If there is any nobility and true worth developed by getting at the truth with accuracy and treating it in a large-minded, generous, sane, and wholesome way—then the balance lies decidedly in favor of the work of the university. Of course, every educational institution of any standing understands and gives true value to the weight and influence of personal character in an instructor—but this is not a matter which any of these critics seem inclined to discuss. If there is any member of any faculty in any institution whose personal character is not such as to make his relations with the students constantly helpful, stimulating, inspiring, and making for sweetness and light—he ought to be dismissed. No one will take any other ground than this under any circumstances whatever: and many denominational colleges need new light and life on this very line.

President Angell, of Ann Arbor, once said: "In twenty State institutions—all from which I have facts on this point—it appears that seventy-one per cent. of the teachers are members of churches, and not a few of the others are earnestly and even actively religious men who have not formally joined any communion. When we remember that colleges not under State control—certainly this is true of the larger ones—do not always insist on church membership as the condition of an appointment to a place in the faculties, and that no board of regents or trustees of any State university will knowingly appoint to a chair of instruction a man who is not supposed to be of elevated moral character, it must be conceded that the pupils in the State institutions are not exposed to much peril from their teachers. But the great majority of men who choose teaching as their profession always have been and are always likely to be reverent, earnest, even religious men. So it has come to pass that seven or eight of every ten men in the corps of teachers in the State universities are members of Christian churches. If you go to the cities where those universities are planted, you will find a good proportion of these

teachers superintending Sunday schools, conducting Bible classes, sometimes supplying pulpits, engaged in every kind of Christian work, and by example and word stimulating their pupils to a Christian life."

Decrease in the ministry

With regard to the statement made that State universities are not preparing men for the ministry—there are at least two sides to that. Some of the most able ministers that I have ever known have been men who came out of State universities—Bishop Bashford, of the Methodist communion, for one. Some of the weakest ministers I have ever known—men who were a constant menace to their church and to vital Christianity in any community—have come out of the denominational colleges. Very few denominational colleges claim to give, or attempt to give, more than general culture. Whether or not a man enters the ministry depends, with the college as with the university, not upon his college work but upon conditions outside of his college work. The unquestioned fact, however, with regard to the lessened number of college men entering the ministry is simply this: a generation ago no one was supposed to need broad, general culture except men who were to enter one of the four great professions. Today we seek to give *all* men this broad, general culture. In proportion to the total number educated in this way, there are therefore fewer men entering the ministry than heretofore. This is inevitable, and is not at all the result of the character of instruction. Still further, the recognition by the world of commerce and trade of the value of college and university training, and the immediate and large returns which this world is willing to give to well-trained men who enter its service—this is what has drawn away from the ministry a certain class of men who formerly could receive neither social distinction, nor public recognition, nor adequate returns, outside of the professions. I am sure you have seen enough of the world to understand this. The denominational colleges admit this as to their own graduates.

Character of students

The statement of the writer "that the wild and reckless resort in greatest number to State universities, where the restraining influence of Christianity is supposed to be less," is about as radically wrong as any single statement possibly could be. As a matter of fact, if a man has a wild and reckless son, and is anxious as this writer says "all classes of people" are anxious, to have "their children form a good moral character"—he always sends the boy to a denominational college where he "can be put under good influences." Again and again presidents of some of the largest denominational colleges have told me that this practice throws into their colleges the very worst class of students—a class concerning which they hardly know what to do or say. Again, it is only too true that in many of these colleges the personal influence, or ecclesiastical influence, or social influence, of parents, added to the (often) necessity of revenue from tuition and the hope of gifts or devises, constantly militate against prompt and effective discipline, and tend to leave the vicious and troublesome students on the hands of the college authorities. On the contrary, every student at a State university knows perfectly well that his connection with the university depends absolutely and entirely upon the success of his work. While State faculties are patient, often perhaps unduly patient, with those who are in their classes—patient because they are anxious to bring the man, if possible, to his right mind, and to secure for him the largest possible results of sound training: each student knows that nothing can finally save him from shameful failure and dismissal, if he does not do his work. I do not hesitate to say that my observation warrants the assertion that the per cent. of mature, industrious, faithful, loyal, and upright students in State universities is really larger, and I think much larger, than in any other class of educational institutions.

Special services

I know perfectly well that at a State university, within its walls, and apparently under its own direction and control, there

is always, and always must be, less of what is known as "religious organization," "religious life," and "religious movement," than in a denominational college. In a college under the direct and distinct control of say the Episcopal Church, the services are more numerous, more formal, more generally controlled and influenced by the faculty, more often under the direction of some member of the faculty, and more generally within college hours—and there is a greater willingness to set aside ordinary college work for the sake of one or more of these services—than is possible in a State institution. But I am very far from believing that this necessarily means that the young men in such a college are under better influences; that they are more manly, more upright, more wholesome in their lives; or that they are more really Christian men than those who attend public institutions in which these movements in these especial forms are almost impossible. I am not so sure that the banker who would call his clerks together every morning and open his bank with prayer and close it at night with a religious service, would really do more for the coming of the kingdom of God in this world than the equally conscientious Christian man who brings himself in sympathetic, personal touch with his employees, but who conducts his business in the ordinary way. This illustration is not complete by any manner of means—but possibly it will give you an inkling of the thought that is in my mind. I should be a little afraid if I were a banker and gave due notice that no one would be employed by me or that no one could stand well in my favor unless he were a member of my church, that some young men with mockery in their hearts would become members of my church, and exceedingly active in church matters, for the sake of a position in my bank.

Most desirable form of chapel service

I have said all I care to say—possibly more than I ought to have said: and I shall certainly not trouble you by saying it again. You and I have been close together in the past, however, and I feel sure that this comradeship in what I hope has

always been good work warrants me in taking your time to express as clearly as I may my own convictions on this important subject. Let me say in conclusion that for direct, practical, and efficient influence for all that is good and true and beloved of God, I believe that the daily "chapel" at the State universities which I have known—brief, simple, purely devotional, with attendance absolutely voluntary—is much more effective upon the three or four hundred young people who come together each day and upon all who will be touched by the remembrance of these services later in life, than the usual college service in a room packed by a rule of compulsory attendance, followed by declamations or other forms of college work (as is often the case), prefaced by official announcements for which all are held responsible and therefore must attend. May I add that at the last meeting of the Executive Committee of the Y. M. C. A. of a most noted state, one of the most discouraging reports made was that a positive effort had been made in all (or many) of the colleges of the state, thru the proper authorities, to secure the elimination of secular features from the daily chapel exercises, and the maintenance of a purely devotional service—and the movement had failed!

In spite of the length of this, hurriedly yet as always,

Faithfully yours,

JAMES H. CANFIELD

COLUMBIA UNIVERSITY

IV

THE POSITION OF LATIN AND GREEK IN AMERICAN EDUCATION

I. THE PRESENT POSITION OF LATIN AND GREEK

The heat of the strife over the position of the ancient classics in our curriculums has died away. Only rarely nowadays does either the advocate or the opponent of the study of Latin and Greek indulge in polemics. The latter is satisfied because he knows that in most schools and colleges the student has no reason to take instruction in Latin unless he elects the study of his own free choice, and that in the great majority of public high schools, now more than 7000 in number, no opportunity is afforded to study Greek even if the pupil desires to do so; and the friends of the classics, engaged meanwhile in adjusting themselves so far as may be to the new conditions, have observed that the questions relating to the status of Greek and Latin are for the most part merely phases of a much broader problem, which has to do not only with the determination of educational values but also with the adjustment of the limits of prescription and election of studies. The chaotic condition of the courses in many of the larger institutions of secondary as well as of collegiate rank must eventually, for administrative if not for educational reasons, give place to a more systematic grouping of subjects; and indications point to a general movement in that direction. The time has come for the fresh consideration of course-making along constructive lines; we are justified therefore in entering upon an inquiry as to the place which Latin and Greek now have, and should have, in our courses of study.

The statistics giving the enrollment of students in the studies of secondary schools which have been published in the Reports of the Commissioner of Education since 1890, have been much

discussed and variously interpreted. Whatever may be the difficulty of drawing from them correct inferences in regard to matters of detail, it is safe to use them as a gauge or register of general tendencies; but before presenting the figures showing the enrollment in Latin and Greek it will be necessary to take account of the statistics of attendance.

In 1889-90 the total attendance in public and private high schools and academies in the United States was reported as 297,894; fourteen years later, 1903-04, it had reached the surprising number of 739,215.¹ While the population of the country in this period increased about 28 per cent., the attendance of the secondary schools was more than doubled. The rate of increase, however, was not the same in the two classes of schools. In 1889-90 202,963 students were enrolled in 2526 public high schools, and there were 94,931 students in 1632 private high schools and academies; in 1903-04 the public high schools numbered 7230, their students 635,808, while the other secondary schools were only 1606 in number, with 103,407 students. The rate of increase in the enrollment of students in the private high schools and academies fell considerably below the rate of increase of population; but there were more than three times as many students in the public high schools in 1903-04 as in 1889-90.

The phenomenal growth of the public high schools is significant from several points of view. The causes to which it is due cannot even be enumerated here; but of immediate bearing upon our subject is the consequence that the drain upon the resources of taxpayers occasioned by the necessity of providing buildings, equipment, and instruction to meet unanticipated demands has been so great as to retard the normal

¹ In the last Report of the Commissioner of Education the total enrollment of secondary students in the United States is given as 822,235. In this number are included students in "public high schools, public normal schools, public universities and colleges," "private" high schools, normal schools, universities and colleges, "private colleges for women," and manual training schools. "While the number of secondary students in the preparatory departments of colleges and other institutions is given," the Report adds (1904, vol. 2, p. 1729), "it has been found impracticable to collect complete statistics of such departments." For this reason statistics showing the number of secondary students enrolled in various studies are limited to the public and private high schools and academies.

increase in the compensation of teachers, which should keep pace with the increase in the cost of living and of professional preparation. The inadequacy of compensation is driving from the high schools many of the strongest men on the staff of instruction, who are forced to abandon teaching for less congenial but more lucrative pursuits; and it tends to deter young men of promise from entering the profession. The proportion of women giving instruction in public high schools is already abnormally great; and the best men and women alike are generally so overburdened with work that they can command little time to grapple with problems outside of their daily routine. The need of exacting a higher standard of preparation in the selection of secondary teachers is in many places already realized; and there are hopeful indications of a more generous financial support. But meanwhile, after according the fullest recognition to the work of the many competent and devoted instructors who deserve all praise, it is safe to say that, if we view the country as a whole, few subjects have suffered more at the hands of ill-trained and unskillful teachers than Latin. This result is due in part to the notion—happily now less current than formerly—that “anybody can teach Latin,” no matter how meager the previous preparation, and in part to the increase in the enrollment of Latin students, which has been relatively greater even than the increase in attendance and has made the provision for their instruction a difficult matter.

The enrollment of students in Latin in the secondary schools of the United States in 1889-90 was 100,144, or 33.62 per cent. of the attendance; in 1898-99 the number had risen to 291,695, or 51.29 per cent.; in 1903-04 to 369,329, or 49.96 per cent. of the attendance. In 1889-90, then, one student in three was studying Latin; from 1898 to 1904 about one-half of all the secondary students were enrolled in Latin classes. But here again there is a line of cleavage between the public high schools and the private high schools and academies. The proportion of the students who take Latin is slightly lower in the latter than in the former; the Latin students in the public high schools since 1898 have averaged more than 50 per cent. of

the entire attendance. In 1903-04 46,301 students were enrolled in Latin in the private high schools and academies, less than one-half of the number being girls; in the public high schools 323,028 were enrolled, of whom, in round numbers, 198,000 were girls and 125,000 boys.

A relatively large enrollment in Latin in private high schools and academies might have been anticipated, because the work of these institutions as a class is more definitely specialized in the direction of preparation for college, and the college entrance requirements have generally made Latin a leading subject. The even larger enrollment in Latin in the public high schools, more than keeping pace with their growth, is not so easily explained.

In the Central and Western states the majority of the public high schools have from the beginning aimed to give preparation for college; and as high school systems were developed in the Atlantic States they too shaped their courses in conformity with college entrance requirements. Nevertheless in 1889-90 only 14.44 per cent. of the students in this class of schools were recorded as preparing for college, and in 1903-04 the proportion was less than 10 per cent., while in other secondary schools between a fourth and a third of the boys and about one-eighth of the girls were enrolled in preparatory courses. The enrollment in Latin in the public high schools has beyond doubt been greatly influenced by the prominence of this subject as a college entrance requirement; even in schools in which the percentage of preparatory students is small, the classical preparatory course, tho more diversified than formerly, presents a standard of attainments attractive to ambitious students who do not look forward to collegiate work. At the last Michigan Classical Conference Principal F. L. Bliss showed that the falling off in the number of students of Latin in certain of the Central states, as well as a proportionately greater decline in the number of those pursuing the subject for four years, was caused chiefly by changes in the entrance requirements of the State universities and colleges in those states.²

² Proceedings of the Michigan Schoolmasters' Club, Forty-first meeting (1906), p. 61-64.

The influence of the colleges, however, and the force of educational tradition are inadequate to account for the increase in the enrollment of Latin students in the public high schools from about one in three to one in two, in a single decade; and the maintenance of the higher percentage as an average for six years (1899-1904),³ seems to imply that the increase was not spasmodic or accidental, but an adjustment to a normal condition. Since 1890 there has been an unprecedented expansion of high school courses by the introduction of new studies, and by a more generous allotment of time to older branches. This, moreover, has been accompanied by a marked increase in the attractiveness and educational effectiveness of several subjects, particularly in science, which has profited by the building and equipment of laboratories; it has been accompanied also by an enlargement of the student's freedom of choice, not merely between courses but between studies, and often between teachers. Furthermore, in the past fifteen years there has been in administrative positions in the schools a greater proportion of men without a classical training than ever before. In this period, again, there has been no articulate popular demand for Latin; on the contrary, newspapers and magazines at no time previously gave so wide a circulation to comments and articles adverse to classical studies. That under these conditions Latin in the public high schools has made extraordinary progress in the enrollment of students is explicable only in the light of the fact that with comparatively few exceptions those charged with the responsibility of administration in laying out courses of study and in advising students have emphasized the value of Latin in itself as an educational instrument, quite apart from its utility in securing credits to apply on admission to college.

The position of Greek is less fortunate. In 1889-90 the students of Greek enrolled in secondary schools numbered 12,869. In 1897-98 the number had almost doubled; the enrollment was 24,994. Since 1898 there has been a decline of

³ In 1898-99 50.39 per cent. of the students in public high schools were enrolled in Latin; in 1899-1900, 50.61 per cent.; in 1900-01, 50.45 per cent.; in 1901-02, 50.07 per cent.; in 1902-03, 50.31 per cent.; in 1903-04, 50.81 per cent.

about one-fourth; in 1902-03 the whole number was 18,951, in the following year 18,447, and it is not improbable that the enrollment for 1904-05 and 1905-06 will show a slight further decrease. Here also we must consider the statistics of public and private schools separately. In the former in 1903-04 there were 11,158 students of Greek, of whom about one-half were girls; in private secondary schools there were 7289, of whom only 1512 were girls; the number of boys, 5777, studying Greek in the 1606 private high schools and academies, was greater than that in the 7230 public high schools, of which only 803 (about 11 per cent. of the whole number) reported classes in Greek. The percentage of students of Greek in private schools was about the same in 1903-04 (7.05 per cent. of the whole attendance) that it was in 1889-90 (7.02), but in the public high schools it shows a decline in the same period from 3.05 to 1.75 per cent. of the attendance. The percentage of students of Greek in the total enrollment in both classes of secondary schools in 1903-04 was 2.5: only one student in every forty was studying Greek.

The situation is not, however, so unfavorable as at first glance it might appear to be. For although the enrollment in Greek has fallen far behind that in Latin, the increase from 12,869 students in 1889-90 to 18,447 in 1903-04 means that the students of Greek gained in number more than 40 per cent. while the population of the country increased only 28 per cent.; and the largest percentage of increase was in the public high schools, in which students of Greek in 1889-90 numbered 6202, in 1903-04, 11,158. In the private secondary schools the percentage of the whole number of students taking Greek is relatively larger because some of these are under the control of religious denominations and lay emphasis upon the study of Greek from the theological point of view, and others prepare students almost exclusively for colleges that exact Greek as an entrance requirement. If the enrollment in Greek the country over had continued to increase at the same rate as in Latin, the number of students of Greek in 1903-04 would have been above 45,000.

Not many decades back a large proportion, if not the ma-

jority, of students of Latin studied Greek also; but assuming that all students of Greek in the secondary schools elect Latin, we see that in 1889-90 of Latin students only one in eight was studying Greek, in 1903-04 only one in twenty. The number of students that in 1903-04 were electing elementary Greek in their first year of collegiate residence is too small to affect the result appreciably; the gradual divorce between the two ancient classical languages in our secondary education is one of the most noteworthy phases of its recent development. Nevertheless it is not necessary to appeal to the educational experience of other countries to contribute a parallel or furnish an explanation; the causes are not far to seek.

In the first place, the one profession or calling for which an early knowledge of Greek is reckoned important if not indispensable, the Christian ministry, no longer attracts young men as formerly, and does not now exert so powerful an influence among us as it once did in favor of a literary education. Even in 1889-90 only 7013 students were reported in the theological schools of the country; in 1897-98 there were 8371, but in 1904 the number had fallen back to 7392, about the same as that in 1890-91. The number of students enrolled in the law schools in 1903-04 was 14,306; in the medical schools, 26,949. The enrollment in medical schools, and probably also in law schools, has been abnormally stimulated by the number and wide distribution of these institutions, some of which are purely commercial, and many of which are of low grade; but the enrollment in the theological schools is abnormally low, a condition resulting from the secularizing of our education and the lack of adjustment between the public school system as a whole and the organization of society along religious lines. To this same cause we may undoubtedly attribute the fact—if it is a fact—that is occasionally mentioned by professors in theological schools, who say that theological students at the present time are of a lower average of ability than formerly; since the great majority of boys who receive a secondary training are, at the age when life purposes become fixed, in public high schools, where the claims of the ministry are not and cannot be urged, it may well be that the narrowing of the field

of selection affects the quality of the students who choose the ministry as their life work; we may more easily underestimate than overestimate the influence of the secondary school in determining both the choice of a career and its effectiveness. But this subject cannot be pursued further here. The number of students in secondary schools who are in any degree influenced to study Greek by a consideration of its value in the interpretation of the New Testament is relatively much smaller than in the past.

A second cause lies in the character of the constituency from which the increase in the attendance of public high schools has been largely recruited. Whatever the local organization of the high school may be, or the particular form of its adjustment to the unit of civic administration and support, its existence as an educational type implies a concentration of population above a certain limit, which in some states is considerably lower than in others. There is a large number of high schools in towns of less than four thousand inhabitants; but adopting for convenience the standard of "urban population"⁴ employed in the last Census, we note that in 1880 in the United States the persons living in places with a population of 4000 or more represented 25.8 per cent. of the total population; in 1890, 33.1 per cent., and in 1900, 37.6⁵ per cent. This urban population was not evenly distributed, but massed in certain geographical divisions. In the North Atlantic states in 1900 64.7 per cent. of the population were living in incorporated places and towns containing upward of 4000 inhabitants, as against 57.9 per cent. in 1890 and 48 per cent. in 1880; in the North Central states, the percentage in 1900 was 35.5 and in the Western states 35.9 per cent., as against 30.1 and 33.4 per cent. respectively in 1890, and 21.1 and 27.5 per cent. in 1880.⁶ In the South Central states the urban population in

⁴ Defined in Census Reports, Twelfth Census, vol. i. p. lxxxi, as including "all incorporated places with a population of 4000 or more and all New England towns of like population which do not contain any incorporated places within their limits."

⁵ Hawaii, the Indian reservations, and Indian Territory are excluded from consideration in this comparative view, because they were not reckoned in the percentage of 1880.

⁶ The enrollment in the public high schools in 1903-04 in the North Atlantic

1900 formed only about one-eighth of the whole (13.5 per cent.), in the South Atlantic states less than one-fifth (19.6).

Tho many factors enter into the final result, it is certain that by this augmenting of urban population both the attendance and what we may call the social tone of the public high schools have been much affected. The tables of the Census showing the distribution of persons of foreign parentage are too extensive to be summarized here; we must content ourselves with the brief general statement that "persons of foreign parentage comprise from three-fourths to more than four-fifths of the total population of very many of the principal cities in 1900. . . . More than three-fourths of the population of New York and Chicago is made up of persons of foreign parentage, Chicago having the larger population, or 77.4 per cent. as against 76.9 per cent. for New York City. Boston has very nearly as large a proportion of foreign parentage, or 72.2 per cent., while in St. Louis this element constitutes 61 per cent. of its entire population."⁷ In many smaller cities the percentage of persons of foreign parentage is nearly as great. There has been a constant increase of population of American stock, and the drift of boys from country to town continues; but no one who has visited high schools in many cities can have failed to notice to how great an extent students of foreign parentage are availing themselves of the privileges of secondary education.

Until beyond the middle of the last century our educational development was along national lines, and tended toward those ideals which reached their most complete expression in New England. Valuable as is the contribution which the influx of foreigners since the Civil War has made to our population, it has nevertheless introduced into our urban life ideals of citizenship and education different from those which were the inheritance of the present generation of American born and

States was 207,010; in the North Central States, 300,352; in the Western States, 45,651; in the South Central States, 49,167; in the South Atlantic States, 33,628.

⁷ Twelfth Census, vol. i. p. cxc. An interesting study of the linguistic conditions of Chicago, which have an important bearing on the problem of educational assimilation of the foreign element, has been made by Professor C. D. Buck (Decennial Publications of the University of Chicago, vol. vi. p. 97-114).

bred. The energy of the first generation of immigrants is expended in the accumulation of material resources. The educational ideals of the succeeding generations tend to become assimilated to our own; but it is safe to say that in the families of foreign origin, while there is frequently an ambition to obtain an education, the existence of a tradition or ideal of literary culture is much more rare than in American homes, whether of farmers or of townspeople. The majority of boys and girls from homes without an atmosphere of culture may, influenced by the advice of teachers and the general spirit of the school, be led to study Latin; Greek seems to them very remote. It would never occur to such students to ask for Greek unless as a result of some accidental or artificial stimulus, or because of a dearth of studies the scope and purpose of which seemed more intelligible.

The growth of cities is intimately connected with the amazing development of our country along industrial and commercial lines; and this also has been not without its influence upon secondary and collegiate as well as technical education. The present has been styled "the industrial age"; but in this country more than elsewhere—because we have greater opportunities—men are endeavoring, with the help of inventions and appliances, to exploit in a single generation the natural resources which in a former age would have engaged the activities of many generations; and we all feel the strain of the effort. So varied are the native riches of our vast domains, so numerous and seductive are the calls to the conquest of nature, that the popular emphasis of applied science is not to be wondered at. Nor should we be surprised if, pending a readjustment of current estimates of educational values, the choice of studies in school and college should, unless checked by requirements, veer toward the subjects which have, or are thought to have, a close relation with the work of life. A large proportion of the people, and many educationists as well, seem to have lost sight of the cardinal principle that the fundamental aim of sound education is to develop power, not to acquire information; hence the dangerous trend toward early "specialization." Against such tendencies a study which does

not offer an appeal to a utilitarian motive will find it difficult to make headway. Greek is not alone in this category; it is, further, not an easy study, and when paired with subjects which exact less mental effort, it is liable to lose in competition by reason of its greater difficulty.

Notwithstanding these disadvantages, the enrollment in Greek in secondary schools more than kept pace with the increase of population for two reasons. The first is that in so great a country there must always be a certain percentage of those who, from family tradition or a literary bent or theological interests, will have for this study a predilection which no outside influence can uproot; but the second and much more important reason is that until recently most colleges made Greek a requirement for admission to at least one course.

How great have been the changes in the requirements for admission to college in the past decade one familiar with the older order of things will appreciate by glancing over a tabulated list of the present requirements, such as that published in the Proceedings of the North Central Association of Colleges and Secondary Schools for 1905. Some institutions, as Princeton and Chicago, still require Greek for admission; others, as Yale and Harvard, give it a certain amount of protection; but the majority now make entrance without Greek comparatively easy. Herein lies the chief cause of the decline in the enrollment of Greek students in secondary schools from about 25,000 in 1898 to less than 18,500 in 1904, in the face of an increase of almost 200,000 in the total attendance. The limitations of space make it impossible to analyze the statistics in detail; but especially instructive is the decline in the number of Greek students in the secondary schools of the North Central states from 5030 in 1897-98 to 2767 in 1903-04, when confronted with the changes made in the admission requirements of prominent colleges in the same states, which in this period began to give the degree of Bachelor of Arts to all graduates and modified their courses of study and requirements for admission accordingly.

The statistics of the enrollment of students in Latin and Greek in the colleges are not complete enough to serve as a

safe guide. The numbers given in the Report of the Commissioner of Education for 1900-01 were 27,219 and 16,218 respectively; in the Report for 1903-04, 26,056 and 14,729. In these totals, not to speak of other omissions, no report is included from Harvard or Yale, the University of Michigan or the University of Chicago; and it is not clear whether in the case of all the colleges reports from which were received the numbers refer to individual students or to elections of studies. This much, however, we may say without fear of contradiction, that in many institutions the collegiate student now has so large a freedom of choice among so many subjects that he may, if he chooses, begin to "specialize" soon after he enters. The natural consequence is that, if he is ambitious, he will probably choose work, so far as possible, in preparation for the career which he sets before himself. In not a few institutions the idea of a "liberal education" in the old sense is almost lost sight of; and since students elect their studies with a view to future utility, Latin and Greek tend to be taken in college chiefly by those who purpose to become teachers.

Has the advance of the modern world provided subjects to which the time now spent on Latin and Greek might be devoted with greater profit? If not, are these educational resources being utilized in such a way as to produce the best results for training and culture? These questions are too large to be answered in a word; consideration of them may best be reserved for another paper.

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V

CONGRESS OF ARTS AND SCIENCE

UNIVERSAL EXPOSITION, ST. LOUIS, 1904¹

We have here the first volume of the proceedings of the Congress of Arts and Science which was held in St. Louis during the exposition year of 1904. This book contains the introductory material (the history and plan of the Congress, the names of the officers, chairmen, and speakers), and the papers read in the so-called Normative Science Division, embracing philosophy and mathematics. Seven more volumes dealing with historical science, physical science, mental science, utilitarian science, social regulation, and social culture are to follow.

In order to appreciate an undertaking of this kind it is essential that we understand the purpose underlying it. The world's fair congresses held previously to the St. Louis Congress had been more or less aimless affairs; they differed in no important respect from the special scientific associations which meet from time to time in the different countries, and which are either national or international in character. They were wider in scope, it is true, than the ordinary conventions of the natural scientists, psychologists, mathematicians, and other scholars, embracing as they did nearly all the branches of learning, but they were all characterized by the absence of a real inner purpose and plan. Such men as felt inclined offered the results of their researches, which were generally of interest only to those working along similar lines. Instructive and important tho these meetings may have been, there was nothing to justify their being held in an exposition city rather than anywhere else except the desire of the participants to combine pleasure

¹ Edited by Howard J. Rogers, A. M., LL. D., Director of Congresses. Volume I: History of the Congress, by the Editor. Scientific Plan of the Congress, by Professor Hugo Münsterberg. Philosophy and Mathematics. Boston and New York: Houghton, Mifflin and Company, 1905. ix. 626 p. \$2.50 net.

with business or the wish of the exposition managers to attract a few more visitors to the fair.

The men behind the St. Louis Congress felt that imitation of the method or lack of method employed by former enterprises meant certain failure. They believed that in this case, more perhaps than in the case of material exhibits, the exercise of care and judgment was needed to make a congress worth while, and they set about solving the problem in a serious way. They were guided in their efforts by a definite plan, and they did not leave the realization of the project to chance. Of course, the ideals were not fully realized, many difficulties were encountered, it was not possible to enlist the services of all the great foreign scholars invited, and the speakers did not always do what was expected of them. But the general goal of the enterprise was a good one and worth carrying out, and it seems that better results have been achieved than in the past.

The central purpose of the Congress was the unification of human knowledge, it aimed "to bring to the consciousness of the world the too much neglected idea of the unity of truth." The ideal which it sought to attain was a philosophic ideal, and represents a protest against the tendency to narrow specialism which is content to occupy itself with details without taking its bearings in the whole of things. This ideal naturally suggested the need of a logical arrangement of the sciences and an indication of the kind of problems to be discussed in the different fields. Seven general divisions were chosen, in each of which the opening address was given by an American leader of thought upon the unity of the whole field, Professor Royce representing normative science; President Wilson, historical science; Professor R. S. Woodward, physical science; President G. S. Hall, mental science; President Jordan, utilitarian sciences; Professor Lowell, social regulation; and Commissioner Harris, social culture. The divisions were subdivided into twenty-four departments in which the fundamental conceptions and methods and the progress made during the last century in the field of the department formed the subject of each opening address. In each of the one hundred and twenty-eight sections of these departments the relation of the special branch

to other branches, and the most important present problems of the particular field, were made the subjects for discussion. The idea, we observe, was to see things whole and in their proper relations, to unify results, to ascertain what had been accomplished in the immediate past, and to outline the fundamental present problems in each sphere of research. It was an enterprise to warm the heart of the philosopher, and the whole Congress was in a measure a philosophical field day.

With a purpose as all-embracing as this one, it was necessary to work out a classification of the sciences. This difficult task fell to the lot of Professor Münsterberg, whose plan is fully described by its originator on pages 85-134 of the volume before us. This is not the place to enter into the merits and demerits of the scheme, for that would carry us into a consideration of the most important problems of epistemology, logic, and metaphysics. No one has been able to devise a thoroly satisfactory classification, and it was scarcely to be expected that Professor Münsterberg's would meet with anything like general approval. In spite of what the authors of such systematic arrangements of world-facts themselves believe, their classifications usually start out from debatable metaphysical assumptions. One's classification of the world depends upon one's view of the world, upon one's philosophy, and will, if logically deduced from the assumed principles, be accepted only by those who agree with the fundamental premises. The plan before us is no exception to the rule. Indeed, a scheme that puts the philosophers in the same division with the mathematicians, which separates psychology, represented as it was at the Congress by men like Höffding and Ward, from philosophy, which cuts the ties that bind the history of a science to that science, which places economics, politics, jurisprudence, social science, and religion among the utilitarian sciences, is bound to meet with more than usual opposition. But there would have been complaints under any scheme, and after all no one was compelled to adopt Professor Münsterberg's philosophy in presenting his solutions to the problems put to him, and so far as I can discover, no one did. Almost any plan was better than none, and the most important question

will still remain, Did the Congress realize its purpose? The answer to the question will depend upon the character of the volumes embodying the contributions of the thinkers who were invited to speak. So far as the work in philosophy is concerned, no one will claim that any remarkable additions have been made to philosophical knowledge. The problems considered are not new, and the solutions offered are not new. The fundamental conceptions and methods of metaphysics, logic, ethics, æsthetics, and kindred branches, the relations of these studies to each other and to kindred fields, and the main problems still awaiting solution in the different domains, have formed, and will continue to form, the subject of many a philosophical story. But it is well to have bound together in one volume a discussion of such basal questions as these, and the philosophical owner of the book will also welcome the presence of such contributions from mathematicians as bear upon his province, the papers, for example, of Bôcher, Picard, Boltzmann, and Poincaré.

The work of the Congress began with an address upon the "Evolution of the scientific investigator" by the distinguished President of the Congress, Professor Simon Newcomb. This was followed in the Division of Normative Science by a paper of Professor Royce on the "Sciences of the ideal." It was in a measure the task of the speaker to justify the coördination of philosophy with mathematics under the title of Normative Science, and no American philosopher could have been found more competent to address a body of philosophers and mathematicians than the one chosen by the officers of the Congress. All that Professor Royce shows, however, is that attempts are made by mathematicians to get at the foundations of their science; and in this respect he gives us a fair idea of the philosophical tendencies prevailing among modern mathematicians, an idea which is strengthened by other papers on philosophy and mathematics scattered thru the volume. But all this does not prove anything more than what has always been granted, and does not remove one's doubts of the propriety of forcing the mathematicians into a partnership with the philosophers. The

philosopher is interested in the fundamental concepts or categories underlying the different fields of mental activity. He is interested among other things in the philosophy or logic of mathematics, and he can gain much help from the mathematician when the mathematician turns logician. A similar plea might have been made for calling the physicists or biologists in session with the philosophers, and the names of many distinguished physicists and biologists might have been cited to show that there is much in common between the philosophical scientist and the philosopher. The mathematician operates with certain fundamental concepts in which the logician is interested, the physicist and biologist operate with others besides. Philosophy is willing to discuss these problems with any one who has a mind to examine them, but it has no more reason for forming a brotherhood with mathematics than with science or history or any other field of research. Of course, if all the categories could be reduced to mathematical categories, and these in turn to a fundamental category of ordinal arrangement, for example, the *logic* of mathematics would become the pivotal science. But that is nothing more than a dream. Still it is interesting to note that the so-called mania to spin out concepts from a single concept has not yet died out.

Two articles introduce the work in the department of philosophy, one on the fundamental conceptions and methods of philosophy by Professor Howison, the other on the development of philosophy in the nineteenth century by Professor Ladd. Professor Howison's paper is disappointing, largely perhaps on account of its fragmentary character. He gives a kind of table of contents which he calls a brief summary of his entire thought, and then an excerpt from the larger document for which there is no space. In this excerpt we get a fantastic deduction of the categories which is far from convincing; concepts suddenly appear in the scheme when they are needed, as is usual in such pseudo-deductions. One does not get from this contribution a satisfactory notion of what modern philosophy is striving for, what its problems are, and how they are solved, but, instead, the writer's own pluralistic system, something about which we do not particularly care in this place. Professor

Ladd offers us a résumé of the history of philosophy from the period after Kant down to the present time. The task he sets himself is interesting and valuable enough, involving as it does a statement of the problems handed over to the nineteenth century by the Kantian critique, a description of the improved solutions, a summary of the principal results, and a survey of the present state of these problems. But we miss in Professor Ladd's account that artistic insight which makes of such expositions something more than a catalog of systems. By the pen of a Kuno Fischer or a Windelband or a Höffding the development of the period would have been traced in a few broad and telling strokes, and we should have received a picture of the age in its essential outlines that would have helped us to see ourselves in the proper setting.

In the metaphysics section we have an article on the "Relation between metaphysics and other sciences," by Professor A. E. Taylor, and one on "Present problems," by Professor Ormond. Professor Taylor speaks in the optimistic rationalistic strain of the old dogmatists in philosophy and would have us go back to Leibniz instead of to Kant. It appears to him "that the recent enormous developments in the purely formal sciences of logic and mathematics, with the host of fundamental problems they open up, give promise of an approaching era of fresh speculative construction." The fear of being suspected of wishing to advertise personal friends hinders Professor Taylor from naming the men who may be expected to do the great work. Metaphysics, he says, is a pure or formal science: all its conclusions are rigid logical deductions from self-evident premises. Pure formal logic and pure mathematics are also pure sciences, perhaps there is such a pure science of ethics and one of æsthetics. Metaphysics may be called the supreme science of order, of logical, spatial, temporal, and numerical order. If spatial, temporal, and numerical order can be reduced to logical order, then metaphysics and logic are identical. There is some presumption, according to our author, that this can be done. Perhaps mathematics, too, can be reduced to logic. The empirical sciences all depend on induction and are merely problematical, psychology

as well as chemistry and physics. They study temporal sequences either with a view to the actual control of future sequences or with a view to detecting under the sequences some coherent purposes. The formal sciences add nothing to our detailed knowledge of the course of events, but enlighten us solely as to the general laws of interconnection by which all conceivable systems of true assertions are permeated and bound together. Metaphysics has no right to interfere with descriptive sciences. The case is different when we turn to appreciation or evaluation of empirical fact. The metaphysician forms a general concept of reality. It is right for him to see whether the knowledge of empirical facts substantiates his view and fills it in.

Professor Taylor's conception of metaphysics as a science of self-evident truth is a dream. There can be no such science of metaphysics as he describes. His hope that all the so-called orders can be reduced to and deduced from one fundamental order is also a dream. He exaggerates the progress we have made towards the realization of this dream. He likewise exaggerates the value of the contributions made by his mathematical friends in this direction. No one has yet succeeded in reducing the concepts of quantity and number to simpler terms.—Besides, what is the subject-matter of this pure science of metaphysics? We are told that it is a science of the general character of reality, that it enlightens us solely as to the general laws of interconnection by which all conceivable systems of true assertions are permeated and bound together, and that it is the supreme science of order, logical, temporal, spatial, and numerical. That is, it seems to be ontology, formal logic, and *Kategorienlehre*. How it can be all these at the same time Professor Taylor does not make clear.—In his paper Professor Ormond confuses the problem of metaphysics with his own solution of it. However one may sympathize with this solution, one must remember that there are other systems and that one's definition must be broad enough to take account of them, particularly in a discussion of present problems. For Professor Ormond consciousness furnishes the standpoint, principle, and method of metaphysics. Everything is very simple from this

point of view : consciousness is the great reality, effort is the core of consciousness, effort is guided by a purpose, and the spring out of which our world is to arise is the idea informed with purposive energy or purpose or will informed or guided by idea.

There are two papers on the philosophy of religion. Professor Pfeleiderer discusses the "Relation of the philosophy of religion to the other sciences" in his usual broad-minded way. The philosophy of religion is looking for important solutions to many of its problems to modern scientific psychology, and to the comparative study of the history of religions. It finds the law of religious development and the standard for judging its value in the inner essence of the spirit of humanity. The God-consciousness is the revelation of the original innate longing of reason after complete unity and consistency in all our thinking and willing. It always depends upon the theoretical perception of truth and the moral standard of life. Hence the philosophy of religion is closely related to ethics and metaphysics. It is also the function of this science to act as judge in the controversy concerning the relation of morality to religion and to show that there is no conflict between the essence of religion and science. All true knowledge of science will be a help to religion and a means of purifying religion from the dross of superstition.—Professor Troeltsch outlines the main problems of the philosophy of religion. Unfortunately this paper is presented in such an ungrammatical, awkward, unintelligible translation as to make its perusal an agonizing task. It seems incredible that the editor of the volume should have allowed such a piece of work to pass. Nearly all of the translations in the volume are poor, but this one certainly deserves special condemnation. Reading Professor Troeltsch's article in its English masquerade is like working out a system of hieroglyphics or a cipher dispatch. The author deserves our sympathy for having his address thus distorted and perverted. Professor Troeltsch emphasizes the importance of the study of psychology and the theory of knowledge for the philosophy of religion. He thinks the Kantian theory of religion must be modified in four essential respects

and that this work will bring out four problems. 1. The theory of knowledge must be entered thru the portals of psychology. 2. The essence of religion must not be sought in Kant's synthetic judgment *a priori*, but derived from searching psychological analysis. 3. Kant's doctrine of the intelligible and empirical ego must be transformed. 4. The religious *a priori* must be actualized; in Kant's scheme it is too abstract, analytical, conceptual.

In the logic section Professor Hammond contributes an article on the "Relation of logic to other disciplines," and Professor Woodbridge one on the "Field of logic." Professor Hammond gives us a bird's-eye view of the different conceptions of logic which have appeared in its history, and then offers his own solution concerning the relation of logic to psychology and metaphysics. Where there is such difference of opinion as to the nature of a subject as in this case, the method of procedure followed by Professor Hammond seems appropriate and fruitful, and might have been employed profitably by other speakers at the Congress. He rejects the extreme formal and metaphysical conceptions of logic, and holds that logic describes and systematizes the formal processes of inferential thought and applies them as practical principles to the body of real knowledge to formulate the laws and grounds of evidence, the principles of method, and the conditions and forms of inferential thinking.—Professor Woodbridge does openly and boldly what nearly all the theorists of knowledge do without being aware of it: he places his logical theory upon a metaphysical basis. His standpoint may be described as a dogmatic evolutionistic realism. There is a developing reality which develops into a known reality without undergoing any other transformation. We know this reality as it is. The fact that knowledge processes are vital processes does not make logic biology, nor does the fact that they are mental processes make it psychology. The important thing about these processes for logic is that they have the value of knowledge, and they have the value of knowledge because they are connected with reality. The things are not ideas representing other things outside of consciousness, but real

things which by being in consciousness have the capacity of representing *each other*, of standing for or implying each other. Professor Woodbridge's paper is an evidence of the fact that pragmatism is not the only theory which can be derived from the doctrine of evolution. Indeed, his criticism of pragmatism is the most satisfactory part of his contribution. His realistic doctrine, however, which borders closely upon materialism, is too vague and undeveloped to be acceptable in its present form. In his endeavor to avoid dualism he loses himself in vague and meaningless statements; he seems to think he can get rid of the problem of consciousness by simply ignoring it, or by making of it a kind of receptacle for the real flesh-and-blood things.

Two articles appear in the Methodology of Science section, one by Professor Ostwald on the "Theory of science," and one by Professor Benno Erdmann on the "Content and validity of the causal law." The first presents the usual positivistic view of science and contains nothing especially noteworthy; the second offers an able and thoro investigation of the concept of causality. While Ostwald rejects entirely the so-called necessary truths, Erdmann holds that modern natural-scientific empiricism, in declaring that there is no such thing as necessity of thought, goes entirely too far. For him there is a necessity of thought peculiar to the relation between cause and effect: a completely irregular and therefore relationless alternation of impressions contradicts not only our experience, but even the conditions of our thought. Rationalism is in the right when it regards necessary connection as an essential characteristic of the relation between cause and effect. *Forces* are the imperceivable relations of dependence which we must presuppose between events that follow one another uniformly, if the uniformity of this sequence is to become for us either thinkable or conceivable. Every possible interpretation of nature therefore possesses a dynamic character. Epistemologically we come finally to a universal phenomenological dynamism as the fundamental basis of all theoretical interpretation of the world.

Professor Sorley discusses the nature of ethics. The object of science is to understand the relations of fact, but it can give

no relevant answer to questions of worth. It can give a description of judgments of worth by psychological and historical methods, but it has not touched the fundamental question of the nature of worth or goodness or duty. The ethical concept is based upon the primary facts of the moral consciousness, upon approbations and disapprobations. These primary ethical facts or judgments cannot be assumed to be of unquestionable validity. Our moral judgments claim validity, they imply an objective standard. But the objective standard may modify or even reverse them. Our ethical judgments stand in need of revision and criticism. The objective standard is not itself given once for all; it has to be formed by accumulation and comparison of moral experiences. Like the experiences on which science is based, these have to be made as far as possible harmonious, and analysis has to be employed to bring out the element of identity which often lurks behind apparent contradiction. But ethics involves a point of view to which science must always remain a stranger. If Professor Sorley means by this that science cannot answer the question, What is the ultimate nature of goodness or worth? we do not see how science is worse off here than ethics itself. Ethics cannot answer the question, either. Every science has its ultimates beyond which it cannot go. The facts which ethics studies are peculiar judgments of worth; it seeks to find the principle upon which these judgments are based, the standard of worth which is itself expressible as a judgment of value. So far as I can see, it reaches this principle in a way similar to the ways of science. And, like science, it stops when it can go no further in its explanation: it cannot tell what is the ultimate essence of the good and why it is good.—According to Professor Hensel in his "Present problems of ethics," we have two opposing movements in ethics, the scientific or evolutionistic school for which the individual is an insignificant part of a machine, and the school proceeding from Kant which takes account of values which the individual himself introduces into reality. The whole moral process is transferred to the individual who has to decide what to do with these values.—It cannot be said truthfully that either one of the ethical speakers

proved himself equal to the occasion: they both fell short of what one had a right to expect.

The philosophical part closes with two articles on æsthetics, the "Relation of æsthetics to psychology and philosophy," by H. R. Marshall, and the "Fundamental questions of contemporary æsthetics," by Professor Dessoir. Professor Dessoir's paper is just what one should desire in this place. If all the speakers had carried out the task put before them as clearly as he has done it, the Congress book would be more useful than it is. Instead of giving us his own favorite theories, he tells us what problems are actually being discussed and what solutions are offered. A contribution like this is really worth while, giving as it were an inventory of the science up to date. Professor Dessoir is also fortunate in having had an interpreter, Miss Puffer, who knows the subject as well as the language of the paper she undertakes to translate,—and English besides.

A meager bibliography of philosophy is appended to the philosophical department. In a text-book for undergraduates such a list of books would find a proper place; why it should have been inserted here is hard to understand. The rest of the work is taken up with the department of mathematics. The papers of particular interest to students of philosophy are: "The fundamental conceptions and methods of mathematics," by Professor Bôcher; "On the development of mathematical analysis and its relations to some other sciences," by Professor Picard; "The relations of applied mathematics," by Professor Boltzmann; and "The principles of mathematical physics," by Professor Poincaré. The misspellings in the titles of the German books mentioned in the volume reach their climax in the mathematical bibliographies, and make one wonder why the editor did not turn over the proofreading to some one who knows the German language.

FRANK THILLY

VI

FRESHMAN ENGLISH (II)

A SURVEY OF IDEAS AND METHODS

In the shifting of province lines, between school and college, college and university, freshman year still marks a boundary. Remembering the continuity of education, we yet see here the beginning of a new educational life. For freshman year, in thousands of young lives, is the introduction to culture. Even after the best of schools, the entrance into college is likely to give a sudden widening of view. No less obviously the ensuing opportunity is largest for courses in English. Rightly or wrongly, courses in English are regarded by the average student as peculiarly courses for culture.¹ The freshman problem, therefore, is peculiarly a problem for the department of English. How shall freshman English be made liberal indeed, be made indeed an immediate means toward the common academic end? The more definite its adjustment to this peculiar opportunity, the more definite is the preparation indicated to the schools. The college thereby shows the school, not merely what to prepare, but what to prepare for. This paper examines ideas and methods of advancing from such achievement and training as is proper to school, thru the introductory course in college, toward the college ideal of humane letters. In a word, it explores the openings for consecutiveness.

One of the tangible means of culture always at hand in college, and rarely at hand in school, is a large library. We all agree that familiarity with books is essential in the process of liberalization; that the schools do not achieve it and, beyond a certain point, cannot; that it is further desirable as serving, not merely studies in English, but all liberal studies; and that it can be inculcated most readily thru English. No one should be impatient at hearing these truisms who has not embodied

¹ This attitude is discussed at length in EDUCATIONAL REVIEW, April, 1904.

them in his freshman course. Doubtless there is no device of examination upon reading that cannot be circumvented by a corresponding device of digest and cram. It is clear, for instance, that our present entrance requirement, English B, is met successfully in many cases by a quicker process than pondering over the specified classics. But what cannot be insured by examination has at least far more promise in a well-directed method of teaching. Freshman English, whether thru literature or thru composition, can effectively open the library.

If freshman English is to foster and direct reading, it cannot be mainly a text-book course, nor mainly a lecture course. Its advance from the teaching of the schools must be an advance in method. No reflection upon the schools is intended; for none is deserved. Many schools have widened their scope and livened their method by providing subsidiary or collateral reading. But, from the very difference of conditions, the student in school generally has a given course focused in a single book. He studies one book, if for no other reason, because he cannot study many. In college the typical conditions are quite opposite. The center of a college is its library. From the beginning a student should learn that his use of the library will be a very practical measure of his culture. Tho text-books are often necessary in freshman English, and lectures are often inspiring, neither the one nor the other, nor both together, should be the main reliance. We must rest content neither with hoping that freshmen will read nor with exhorting them to read; we must make them read and help them read. If freshmen are to find their account in reading three books instead of learning one, we are bound to provide the means and the time in freshman English.

As to means, if freshman English is devoted mainly to composition, the only real difficulty is in guiding and superintending research; for in this case the main use of the library is for compilation, and topics are too various to involve conflict. If freshman English is devoted mainly to literature, the problem, tho not easy, still is not beyond solution by modern library methods. It can be solved by any well-equipped library that sees its importance. The large library

of today can provide ready access, both to the one book that the freshman should read that day in his room, and to the three books that he should consult, compare, and restore on the spot. But the instructor should remember that a large library is primarily not to draw books from, but to collate books in; it is primarily not a circulating library, but a reference library. His assignments, therefore, should call mainly for reading in the library. The books that are to be studied intensively may be few enough to be owned by the student or provided by a special store of duplicates; the books that are to be read extensively should be many enough to compel actual work of comparison in the library. Since the point is not mere quantity, but regularity, the reading need not bulk enough to tax either the students or the instructor or the librarian; but it must be large enough to compel in actual method of teaching a consistent application of the axiom that freshman activity in the library is a fair gauge of freshman awakening. Moreover, if regularity is assured by reports forming stated parts of the class discussion, and system by a printed program, it is possible to give some latitude of time and choice among specified books. While this relieves the librarians, it may be inviting to individual bent. The attention to individuals and the planning of recitations thus implied does, indeed, demand of the instructor more time than a fixed routine of text-book or lecture; but if it makes freshman English really a reading course, it will be worth far more than the additional cost of instruction.

The peculiar opportunity to teach individuals gives a large claim on freshman year to composition. Composition holds its undisputed place by virtue of being an immediate means toward the common end of helping the student to find himself, to work out his own intellectual salvation. Theoretically, indeed, composition is "English" in another sense; but, tho the ambiguity of this term "English" has involved some confusion of theory, in practice the teaching of English commonly includes composition. Practically, then, composition as well as English literature is "English"; and practically the freshman course in English always includes composition. But if in planning an introductory course of literature the department of

English should feel an obligation to serve the whole scheme of liberal studies, much more in planning freshman composition. For composition, by its exceptional character of having no subject-matter, of depending on all subject-matters, has for its essential function to serve all studies in general, and those studies in particular which are most important for each given freshman. Rhetoric, in both its practical and its liberal aspects, is our modern *organon*.² From the Greeks to ourselves, and from the first year of high school to the last year of college, rhetoric is a constant in education. It is that constant discipline by which a student, at whatever period of his education, is called to grasp his thoughts in expressing himself. What those thoughts are, what that self is becoming, is determined by all his studies and all his life. Rhetoric calls upon him to bring all this to bear by expressing himself. It is the office of rhetoric to teach him how to express himself better; it is the office of all his education to make him better worth expressing. That is the fundamental relation, as of all art to all human life, so peculiarly of this universal art to each individual student.

The place of rhetoric in college, then, is measured by its service to the whole scheme of liberal studies. The idea of assigning it to one group of instructors is, not to limit its scope of subjects, but to provide what, in our American conditions, has seemed generally the best economy of administration. In England, and now at Princeton, rhetoric is taught indifferently by all tutors or preceptors in connection with all "reading" courses. A freshman at Balliol or at Princeton learns his rhetoric as he writes themes in history or Greek. This system is as logical as the other, if the tutor can teach rhetoric. Our common American practice goes upon the theory of providing experts in composition, who, tho they cannot beyond a certain point know the student's subject, know how it should be presented. Like the orator of Cicero's definition, the modern college teacher of rhetoric is the man that knows how. And this corresponds to the method of rhetoric, which consists in

² This idea is elaborated in *Publications of the Modern Language Association*, vol. xvii. (n. s. x.), no. 4, p. xxii.

learning how. By learning how to express the significance of Greek play or Elizabethan, of feudal allegiance or the practical philosophy of Horace, a freshman learns what it means to him; he brings his studies into closer relation to himself.

This idea leads naturally to the library. For freshman composition may involve reading, not only in study of models, but also in practice at compilation. Minds accustomed to accept and repeat generalizations at second hand may be taught, not only to reflect, but also, within feasible limits, to investigate. How to find facts, how to compare inferences, and finally how to bring reading to bear,—in all this, freshman composition may be of practical service to any other course, and of liberal service to the student himself. That compilation is commonly regarded as a mechanical process of paste-pot and shears, when experience proves it to be, not only open to originality, but in many cases positively conducive to originality, is a reminder to freshman English.³

As the opportunity of composition in college is to educate the individual, so the essential method. College after college has provided, as a regular part of its courses in rhetoric, a system of consultation hours.⁴ Much as this costs, it is worth far more. Its ideal is that each student should have separately a conference with his instructor in rhetoric on each theme. Tho a secondary motive may be the desire to bring the teaching of English composition into line with the teaching of all other composition, as in music or painting, the primary motive is the desire to fulfill the special function of rhetoric in college, to help the individual find himself by teaching him how to grasp

³ Missouri mentions specific instruction in compilation. Tho it is taught, doubtless, in other freshman English courses and in a few freshman history courses, it seems to have no general recognition. In stressing this application of freshman composition there is no idea, either of confining it to topics from literature, or of crowding out descriptive writing from personal experience. Tho it is more important than teachers generally seem to grant, it can be, and should be, limited in time. For "learning how" has other aspects.

⁴ See "The value of the office-hour in the teaching of rhetoric," *EDUCATIONAL REVIEW*, October, 1894. The system is specifically mentioned by Amherst, Beloit, Bowdoin, Brown, California, Chicago, Columbia, Illinois, Michigan, Mt. Holyoke, Rochester, Smith, and Wesleyan; and is doubtless followed by other colleges.

his own knowledge, whether of study or of observation, and how to express his own personality. The importance of this method in freshman year, when the lad is "moving about in worlds not realized," is so evident that the mere statement of it is an urgent recommendation.

Two general methods, then, are urged upon freshman English by its peculiar opportunity of introducing to liberal culture; first, that it should be a reading course; second, that it should provide regular conference with individuals. Evidently these two may work together by the correlation of rhetoric with literature. There is no better opportunity than the conference with individuals for teaching students how to read and how to bring their reading to bear. But it is easy to make this correlation too strict. The larger opportunity of freshman English is not best realized by confining freshman themes to topics from literature. On the contrary, such restriction often hampers individual expression, and always hampers the natural service of rhetoric to all studies. Correlation in this strict sense may even amount to confusion. Because writing must be learned in part from great writers, or more vaguely because composition is "English," some schools have shut their pupils up to futile attempts upon the life of Burns or the character of Julius Cæsar. It must always be remembered, in school and college alike, that the dependence of rhetoric on literature is not such that all students should always write on books, much less that they should always write on certain prescribed books. Surely writing may be learned from writers; but surely it will not be learned by always writing on writers. That a pupil can write more readily on moths, carpentry, automobiles, on chivalry or socialism, is a bent not to be deplored nor checked. He will become no more literary for writing on Lady Macbeth.

The heresy that the literary culture of composition resides in certain topics and cannot be approached thru others, tho' professed openly by very few, seems to be followed by many. Worse than that, it seems to gain unnatural vigor in the shadow of the college. In the earlier years of the high school, no sin is seen in writing on science, on history, on life; but, from the time when entrance examinations cast their shadow before

to the time when the lad or lass has the sophomore courage of self-assertion, composition is often put in leading strings to literature. The restriction is doubtless due as much to crowding, to bad economy of time, as to conscious theory; but, to whatever due, it has actually hindered the education of hundreds of young lives by making their expression either artificial or sterile.⁵ Thus to sacrifice composition to literature is often to make literature odious while it makes composition unprofitable. Rhetoric will best help literature when it is free to pursue its natural function of helping everything else. For "literary sense" is quickened by every creative effort of the student to express himself; the appreciation of literary form is defined and stimulated by every attempt to revise the form of his own expression. This is a larger and more liberal theory of correlation; and, explicitly or implicitly, it underlies some of our best freshman courses.⁶

The study of form as the common factor in literature and rhetoric may fulfill largely the function of freshman English. While it is practical it may be liberal. Practically, the study of form gives grasp of presentation; liberally, it reacts, thru composition, in quicker and more lucid habit of thought, and, thru literature, in appreciation of how artistic conceptions are embodied, how the artistic impulse works constructively, how truth is expressed in beauty. Between these is no fixed boundary; and the realization of either is imperfect without the realization of the other. Here lies a more fundamental correlation, at once of rhetoric with literature, and of both

⁵ "The schools generally keep their composition work close to the literature studied, while we throw the students into expository work chiefly on non-bookish themes in an effort to get them to stand more firmly on their own intellectual feet" (*Missouri*). "We find our freshmen, many of them, have read comparatively little that is worth while, that they do not think well, that they do not write naturally out of their own experience. They seem more at home with somewhat stereotyped topics connected with books; but they write conventional, artificial, superficial papers on these themes" (*Mt. Holyoke*). "The work in composition is not correlated to that in literature of the first year, it being our belief that it is better for the student to write from his own experiences, or at least on topics which are not bookish" (*Pennsylvania*). The bearing of the present entrance examinations on this is obvious.

⁶ It seems to obtain, for instance, in almost all colleges for women; and these, as a whole, show a superior definiteness of conception and plan.

rhetoric and literature with other studies. Sense of form, in this larger aspect, is more easily inculcated thru the vernacular than thru a foreign tongue, and far more easily in college than in school. The forms that are learned in school from Homer and Vergil, for instance, are mainly forms of inflection, syntax, and prosody. Without belittling these by a superficial view of philology, we may profitably remember that the boy has not conceived the larger aspects of epic form. For even his studies in English may have considered literary form only in its details. Freshman year can relate these details to the larger aspects of construction. And this idea insures against repetition and deviation. Tho form is not to be dissociated from thought, and tho account of the thought is sometimes a test of faithful preparation, still freshman English need not therefore proceed by digest, hermeneutics, and the accumulation of detail. The training demanded of freshman English is not merely the training given by English in school nor by other studies in college. Its place can be justified only by a distinct function. A professor of Greek, not long ago, made this heavy charge against the entrance examinations in English at his college: "You English men have adopted into your system the very methods which a while ago you called the vices of our teaching of the classics." Whatever weight we find in this charge as against entrance examinations, we cannot afford to have it made also against our freshman year. Freshman English may advance from the training of the school and mark its special function in college by consistently inculcating a sense of form.

That freshman English should be a reading course, that it should teach individuals, that its correlation of composition and literature should be, not by topics, but by forms,—if these general propositions be accepted, they become tests of particular plans. Tho uniformity in detail is neither feasible nor desirable, the present diversity is wide enough to suggest in some cases uncertainty or narrowness of idea. Without attempting any single ideal solution, we may measure typical plans by their adaptability to the realization of these principles. The idea of inculcating a habit of reading, important tho this habit is, is.

not in itself either definite enough or large enough to shape a course. That a habit of reading is a main object of the entrance requirements is not in itself an objection. If the reading required of a freshman involves such use of the library as has been suggested above, it will hardly seem a repetition of his work in school; and it may really carry him forward. But the reading habit may be inculcated by any good course of freshman English. Tho it is an important consideration in any plan, it does not by itself indicate a plan. Assuming this as a factor, therefore, we may proceed to test definite plans.

Most obvious of these is the historical survey of English literature.⁷ This begins sometimes, as at Columbia and Cornell, with the sixteenth century; but it more commonly goes back to the seventh. Whether its backbone is a text-book or a series of lectures is not of prime importance. The obvious idea of introduction in such a course is to prepare for more detailed study of periods, movements, or authors, by presenting broadly the whole race movement. From this inclusiveness arise two dangers: the scope may preclude much reading; the method may sacrifice literature to history. Of the manuals for the history of English literature that are now used in schools and colleges, many are very largely, and some are entirely, chronological dictionaries of biography. Without attempting to divorce the literature of the race from the history of the race, we must recognize the error of trying to teach literature mainly as history, and the futility of trying to teach it mainly as biography. Such a method—and it is the method of some colleges as well as of many schools—is evidently inadequate to any distinct function of freshman English. It does not really carry the student forward in appreciation; it does not really bring him nearer to literature; at worst, it may merely burden his mind with insignificant details of history.

True, these dangers are not inherent in the theory. For the historical survey may be planned rather as a chronological

⁷ This is commonly part of freshman English at Beloit, Bryn Mawr, Chicago, Columbia, Cornell, Harvard, Kansas, Northwestern, Pennsylvania, Swarthmore. In a modified form, it is followed at other colleges. In no college does it constitute the whole freshman English course.

series of masterpieces;⁸ and these may be few enough to be studied as forms of literature. If it provide such study, with "extended reading and reports," as at Northwestern, and if the lectures or the text-book establish a sequence of literary development, as well as of political or social development, the historical survey may actually fulfill its object. But such a course demands at least two hours a week, and can well use three. Therefore it is found usually in colleges that give more than the average proportion of freshman hours to English, and provide for composition by a separate, parallel course without specific correlation; i. e., in the Two-Course Type. Generally, these colleges require the course of composition, as necessary to the idea of freshman English, and offer the historical survey of English literature, as an additional opportunity, to either freshmen or sophomores. This discrimination is made even by some colleges that require the historical survey as preliminary to all other courses in literature. The Bryn Mawr plan of spreading the historical survey over two years, a course of composition running parallel in each, is another means of providing sufficient latitude of time. The three possible directions of "English,"—composition, literature, language,—tho each has a fair claim as introductory, obviously cannot all be required in one year. In general, the colleges regard composition as constant, the other two as variable. Most colleges postpone the historical study of the language entirely; and the historical study of the literature partly, that is, for those students who do not devote more than the average proportion of freshman hours to English.⁹

⁸ "The course in literature is designed to meet two demands: (1) that of such students as are not likely to elect further work in English; (2) that of students who expect to make English their major study, or at least to elect further work. . . . The best solution . . . has seemed to be a course which covers in outline the development of English literature from *Béowulf* to the present time, but which lays its emphasis on the careful class-room study of representative masterpieces chosen from the various periods" (*Swarthmore*).

⁹ California, Missouri, and Rochester offer the historical survey of the literature to sophomores, not to freshmen. Hobart and Pennsylvania give to freshmen the history of the language as well as composition; and Pennsylvania gives also the opportunity to take the historical survey of the literature. Kansas and Northwestern require composition, and give also the opportunity to take the historical

Where the three-hour average is accepted as a fair proportion for English, the department may still wish to give freshmen some teaching of literature beyond what is given thru the teaching of composition. Therefore many freshman courses including both composition and literature economize by using both for the direct inculcation of form. Thru somewhat various applications, this is discernible as a common controlling idea. It proposes as an introduction to liberal culture thru English, not a survey of the historical development of literary forms, but a topical survey of the principles underlying these forms. It seeks to give the larger view by grouping criticism, not about historical movements, but about forms of composition and forms of literature. It applies directly the larger correlation of literature and rhetoric suggested above. While the principles underlying the "forms of discourse"—exposition, persuasion, description, narration—are studied both in theory and in practice, their applications in the types of literature—epic, drama, essay, novel—are studied both in theory and in the analysis of masterpieces. And while this latter extends the scope far beyond the student's own achievement of actual performance, it also brings his writing into wider service to his reading by the constant emphasis upon form as the main aspect. In a word, the plan is to unite with the service of composition as an *organon* the further service of providing canons and methods for all literary study.¹⁰

survey. Cornell, which divides its courses most definitely into three groups—composition, language, and literature—opens to freshmen either composition or an historical survey of the post-Renaissance literature, or both, but the introductory course in the language (Old and Middle English) only to those who have completed the course in composition; *i. e.*, except in special cases, only to upper classes. Practically all Cornell students taking the historical survey find the course in composition indispensable as preliminary or parallel.

¹⁰ How this idea may be worked out will be suggested by two typical formulations: "A freshman course . . . should take the student just entering upon the more independent life of the college and teach her to think lucidly, accurately, and vigorously in written language. Mere mechanics of style should have been mastered in subfreshman work. The student should be made to feel the vital relationship between laws of thought and laws of expression. Such work can hardly be done until the student has cut the leading-strings of secondary schools. . . . Its relation to previous school composition is to show the rationality of the rules of expression, and to use the skill acquired in secondary work for the furthering of the creative and thinking powers of the mind. . . . The right freshman course

Besides the economical virtue of combining two studies by a single object, such a course has another recommendation. Its interpretation of both composition and English literature by the principles of form may help the interpretation of other literatures. This service has some importance in view of the provincial campus tendency to think of literature as English. The teaching of other languages, tho it may do much to dispel so narrow a conception, is still restricted by necessary emphasis upon detail. Freshman French and German are usually so elementary as to compel the focusing of attention upon vocabulary and syntax. Freshman Latin and Greek, tho they presuppose these in greater or less degree, still are more restricted than English from the larger aspects of form. Having grasped in school the habitual Latin idioms and the elements of syntax and prosody, a freshman ought to be ready for the discipline of a broader study of grammatical and rhetorical constructions, and for appreciation of the clarity and elegance of Latin prose. But while what he learns from a paragraph of Cicero helps him to comprehend a paragraph of Burke and to make a paragraph of his own, the reaction of Latin on English in the practicable technic of composition may be repaid by a reaction of English on Latin in appreciation of Latin literary forms. Freshman English, where it is focused on form, should directly define and heighten appreciation of both literatures and of literature in general. There is little danger of wasteful repetition, and there is much hope of culture, in bringing Shakspeare to the help of Sophocles. Whether Shakspeare or Sophocles

should give the key to practically all study of formal excellence in literature" (*Baltimore*). "Our aim in freshman English is to teach students how to write and how to read, both these coöperatively; *i. e.*, the composition and literature are taught together, and the literature is taught on a composition basis. Our aim is to teach expression and the canons of literary criticism under the forms of discourse. This course . . . is fundamental to all subsequent courses in literature and composition in the college, since (a) it provides the critical basis for all literary study, and (b) . . . it is the basis for all courses in artistic composition" (*California*). The idea is further defined in contradistinction to the following: "We draw the line sharply between composition and literature. . . . In Course I . . . a volume of prose selections . . . solely for their value in style. . . . On the other hand . . . many papers in the literature courses . . . for enforcing good expression" (*Cornell*).

shall profit the more is of no importance beside the opportunity of widening the outlook on literature.

That a course focused on form will be hard and dry, abstract and artificial, is the natural suspicion of those who distrust rhetoric. The answer is ready that form is not formality, that art is not artificiality. But the answer, tho an axiom, is not always effective. Popular criticism has more confidence in the human interest of history as a means of awakening the actual freshman. Therefore a course in form must be vindicated by its actual method. For the danger surmised, however unintelligently, by popular opinion, is, after all, a danger. Such a course must prove in act that definite realization of form in literature is no less desirable than vague admiration, and that it helps, not hinders, æsthetic and emotional appreciation.¹¹ It must not turn form into formality. It must beware, on the one hand, of over-technical detail and, on the other hand, of seeking largeness by such generalizations as are too abstract for freshmen. But all this it may do, and has done. It has unfailing sources of vitality in the very masterpieces which are always the basis of its study, and in the refreshing contact with individuals. For the rest, it needs only the right teacher.

Finally, a large class of courses relies on composition alone. It presents only such forms of literature as are also practicable forms of composition, and subordinates the study of these to the student's own performance. Some courses of Composition Type B, and all courses of Type A, tho they do, indeed, deal with principles and forms of literature, confine themselves to such aspects of principle, and to such forms, as the student can put directly to use in his own work. They make no study of drama, because a freshman cannot write plays; they make much study of essays, because by his own essays a freshman learns practically to grasp the knowledge that he is receiving from other courses, and to find the relation of this knowledge to himself by expressing it individually. In the preceding class of courses composition controls; in this class it absolutely

¹¹ "We believe a definite understanding of form essential to intelligent and appreciative reading" (*Dartmouth*).

determines. Their whole idea of freshman English is a practical interpretation of the word *organon*.

This idea may consequently determine the order of presentation. Shall freshman composition begin with description and narration—that is, with artistic method; or with exposition and argument—that is, with logical method? The former is the more attractive, and appeals more directly to individual expression. But the latter has two advantages which, when composition is the sole reliance, seem to give it precedence. First, it has far greater opportunity for teaching structure definitely. The logical aspects of unity, emphasis, and coherence, for instance, are more easily learned, and more widely practicable, than the artistic aspects. Secondly, and more largely, by opening correlation with all studies,¹² it displays at the start the constant function of rhetoric as an *organon*.

Exclusive reliance upon composition implies that the idea of the *organon* is regarded as summing up the most important functions of freshman English, and that three hours a week are found necessary for its due realization. Other reasons, of course, have weight in particular cases. Some colleges find themselves bound to this plan by the deficiencies of their preparatory schools, or the imperfect adjustment of requirements for entrance. In so far as this is the determining motive, better preparation thru better adjustment may lead to another plan. Again, three hours clear for composition are welcomed in some cases as opening the way for fuller practice in the less practical and more creative forms, for developing expression as fully as construction; and, in other cases, for beginning at

¹² "Freshman year . . . should give training in the expression of ideas . . . should teach the student to express what he thinks rather than to tell what he has done, or seen, or imagined" (*Illinois*). "We place the emphasis on exposition, partly because every one needs it, and always needs it; partly because it seems to be the form of writing best adapted to the student's development" (*Mt. Holyoke*). "The course is conceived as an *organon* for all students—literary, scientific, and technical" (*Missouri*. See the note on Missouri above, p. 489). On the other hand,—"The freshman work is chiefly in description and narration. We have a sophomore requirement in English, and the writing in this course is chiefly expository" (*Iowa*). "Our Rhetoric 1, 2, 3, running thru the three terms of freshman year, are designed to give a general treatment of the fundamental principles of descriptive and narrative writing (1st term); exposition (2d term); argumentation (3d term)" (*Rochester*).

once some training in oral composition. Oral composition, as its scope and methods are better understood, is more and more likely to make its claim heard. For at last we have begun to understand that it need be neither school declamation, on the one hand, nor, on the other hand, such drill in argument as is quite too severely logical for freshmen. Meantime it is evident that a course including both written composition and literature thereby necessarily excludes oral composition; and that written composition is more readily and more largely applicable as an *organon*. Unless freshman English, therefore, be devoted exclusively to composition, oral composition must be postponed. These reasons have weight; in some cases they are final. But the root reason for the wide preponderance of composition in freshman English today is itself, in some cases, sufficient reason for its exclusive predominance. This reason is that rhetoric, by the method of its best teaching, offers to freshmen a peculiarly direct approach to culture. To regard any one means of culture as a superior process is intolerable. No such arrogance is possible in the teachers of a subject whose chief function implies its dependence on all other means. But tho rhetoric has no superior process, it has a unique method. The very realization of its function demands that it should have this, and suggests the peculiar value for those student minds which are least mature. Freshman composition, when it really advances from the work of the schools by that individual teaching and free correlation which are its peculiar opportunity in college, is far more than practical; it is liberal. Practical in its achievement of useful writing, it is liberal in its reaction upon the writer. It furthers directly his critical appreciation, his logical grasp, and his effective sense of his own powers. Culture, in the last analysis, is of and by and for the individual. Among many considerations that are shifting and transitory, that gives a certain permanent claim to rhetoric.

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VII

THE TUTORIAL SYSTEM IN COLLEGE¹

This talk, I imagine, is in a way a sequel to the paper and discussion to which you listened this afternoon on the ever old and ever new theme of the large and small college. Perhaps on that question there are as many views as there are minds that view it. Somewhere within that region of discussion I firmly believe lies the fate of the American college.

The large college has had the advantage over the small colleges of more opportunities and a greater cosmopolitanism. The smaller college has had the following advantages over the larger college: greater accessibility of the opportunities to the student, more definite and concentrated work and a closer personal touch with his professors. These inestimable advantages the larger colleges and universities have been losing, and the great aggregate of students who flock to the larger centers of learning have been becoming less and less an organized army and more and more a mere gregarious herd. Whatever be the experience of other places, I have no hesitation in saying that the experience of Princeton University was that with the rapid student growth there came to be less and less attention given to the individual student's needs, and more and more dispersion of the individual students in the masses of their fellows,—so that whatever the good of the cosmopolitan college fellowship, and whatever good the student might chance to get from the larger opportunities, he was losing something priceless, namely, definiteness in his work and that close personal touch of the student with the master, without which the best education cannot be obtained and never is obtained, all the

¹ Revised stenographic report of an address at the annual session of New England Association of Colleges and Preparatory Schools at Boston, Mass., October 12, 1906.

way from the child at the mother's knee to the highest graduate student in the most advanced subject. Pardon me if I speak with some conviction on this, for I believe it fully.

And to speak as briefly and plainly as I can of an experiment we are now making in order to recover what we believe to have been the priceless advantage of the small college and combine it with the cosmopolitanism, the manifold opportunity of the larger university, it was natural when we thought over that question to look back to the beginnings of the American colleges and to ask from what root we have sprung. And as we looked back and read the history of the oldest collegiate foundations, we soon discovered that one of them started with a president and two tutors, and another with a president and one tutor, and another with a president who was president, faculty, and tutor—all in one. But somehow that little relic of ancestral English education had been lost sight of, and we wondered whether by turning our eyes again to the English universities, from which, after all, the American college system has sprung, we might not discover there some helpful information. Naturally we turned, to make a long story short, to the Oxford tutorial system.

It is not easy to understand Oxford, any more than it is to understand England. Oxford is not a logical, but an historical expression. It is full of inconsistent coëxistences of old and new, of lingering, apparently obsolescent modes of behavior and thinking, side by side with the newest things of modern life. You look at an Oxford building. There will be an old piece of the fourteenth or fifteenth century, somehow planted with the newer eighteenth century work; old and new together, perhaps incongruous at first sight, and yet all blended and mellowed by the ivies and vines and softened by the effect of the climate. Such, also, is the history of Oxford in things intellectual. Originally a mass of Latin statutes governed the university, replaced in part by later statutes in English, some of them left with the old Latin titles, some all Latin, some all English, some all English but with the ancient headline left, from reverence or forgetfulness. So if you go to the course of study you find still lingering mediæval terms, the

word "commencement," which we have taken, the word "responsions,"—and so you might go on to the end of the list,—side by side with the newest things. And you find a surging conflict of opinion, often ending in compromise, sometimes ending in the retreat of knowledge, at other times ending in the advance of knowledge. And so the tides of Oxford life have been flowing back and forth, and yet on the whole there is an irregularly increasing intellectual gain.

Now, if it is not too much out of the way, I would like to stop an instant just to say what was the matter with Oxford, and how the tutorial system remedied that trouble. The dark age of Oxford was the eighteenth century. Read the pages of Gibbon, Swift, and Adam Smith. Any one may look there and see how knowledge seemed to have vanished. It was a place of sinecures, of "licensed idleness," of indifference, of intellectual and moral decline. And yet it was the very time when Cambridge was at its brightest intellectual eminence. At the opening of the nineteenth century, it occurred to one man,—a real man,—Evesleigh of Oriel College, that something was the matter, and the matter was that there was no guarantee of distinction to a student who did well in his examinations and no mark of reproach on him if he did ill, and, most charmingly absurd of all, there was no security against collusion between the students and the examiners. It occurred to him that the first thing to do was to reform the system of examinations, and thus straighten out the course of study somewhat. He made the attempt, and was successful in introducing a reformation of the abuses that had existed. Soon there sprung up in a limited but brilliant way an intellectual revival in Oriel College, but it did not sweep the university. It was one thing to reform examinations; it was another thing to reform professors and students. It was one thing to lead the horse to the water; it was another thing to make him drink. And yet the first step in the right direction had been taken by abolishing evils connected with the system of examining and the course of study. It remained for Parliament fifty years later to make a searching investigation into the condition of the ancient university, to go into the reform of the professorate and of the

Fellows, to redistribute the funds, to abolish sinecures, and to complete what the beginning of the century had begun.

But still only the first part of the reform was accomplished, the better organization of the teaching staff, the course of study, and the system of examinations. What difference did it make to a pleasantly idle student what these things were, provided he was not interested? Finally—I cannot place the date of this, but give the tale as I remember it—it occurred to one man,—again a real man,—a young don of Balliol College, that there was no education in the best sense without the one-to-one contact, man to man, face to face. Somehow in there, in the literal handing on of the torch of knowledge from teacher to student, lay the secret. And so Mr. Jowett voluntarily took a few students one by one to meet him once a week and talk over their individual difficulties. He found that such and such a man was weak in his Greek syntax. He would set him a page or two of something to read, or to write him a little paper about it a week after. Another perhaps was weak in his logic, or some part of his logic. Another could not write his Latin well. Another was deficient elsewhere. He talked over the difficulties with each one separately, and made them bring him—or, rather, they were willing to bring him—each week some little attempt of their own to overcome their particular difficulties, and this attempt he would criticise and thus help to set them right. To make a long story short, it was soon evident that students taught in that way were surpassing other students of like natural ability, and after a brief delay,—brief for Oxford,—Balliol College adopted a tutorial system, and Jowett, the famous editor of Plato, became the Master of Balliol. Balliol men began sweeping the honors of the university, and to be a Balliol man was to have the blue ribbon of intellectual distinction.

The next stage was naturally that all the other colleges of Oxford, in varying modes, adopted a tutorial plan. Altho the principle on which that tutorial system is founded is as old as human nature, and is commonly supposed to be a system of teaching which has existed for centuries in the University of Oxford, it is in fact about the newest thing ancient Oxford

has, the most modern thing in it as a well-tested actual piece of educational machinery.

We considered the Oxford experience carefully, and wondered what could be done in an American university to produce similar results in undergraduate students. Perhaps unconsciously, perhaps in part consciously, we began repeating rapidly to a large extent the experience of the University of Oxford. First of all we proceeded to reform our own course of study. I shall not go into that subject at length. Courses of study, schedules of study, are perhaps as dry as the tariff bill or an almanac, and yet they have important uses. We have, however, come—and I will state this without debating or arguing it,—to the following position: that in organizing your scheme of liberal education the four-year college course is to be retained at all hazards; secondly, that the earlier part of the course should consist mainly of prescribed studies of fundamental and general nature; thirdly, that the latter part of the course should consist of studies of which a majority lie in some large department of the student's own choice, the remaining courses being free,—in other words, a system of gradual and progressive election based on a prescribed substratum. And in doing so we organized these studies under three degrees: first, the historical bachelor of arts degree, retained in its traditional significance as including a prescribed training in mathematics and science, the classical literatures, modern literature and philosophy. Then two modern bachelor's degrees,—one the degree of bachelor of science, a specifically modern liberal degree for those whose main studies lie in the scientific direction, and the other the bachelor of letters, a specifically modern liberal degree for those whose studies lie mainly in the humanistic direction. In that way we believe we accommodate nearly all persons who may properly ask to receive a bachelor's degree of any kind in liberal studies at the close of a four-year college course.

Then the question at once arose, How shall we not only bring the course of study to the student, but do the second thing, bring the student to the course of study? Let me speak on that as my principal theme tonight. The first thing to be

done was to find the means necessary to secure the proper men to do that highly important work. President Woodrow Wilson at once appealed to the alumni of the university to give us two and a half million dollars, not for bricks and mortar, not for stained glass windows and chimes and gateways and cages and baseball fields and all that sort of thing, which so many consider the essence of a modern university, but for the men who were to help in this teaching. He appointed a committee of fifty graduates, with a very capable chairman, Mr. Cleveland Dodge of New York, to prosecute this canvass over the whole country. In a brief time we received subscriptions sufficient to pay the entire expense of the experiment for five years, and a part, tho less than the major part, of the endowment necessary to sustain the work in perpetuity. That canvass is still going on. I want to say that the very first effect of this, the most immediately and obviously beneficial effect, was on our own alumni, and they responded quickly and splendidly to President Wilson's insistent assertion that the invisible things were greater than the visible. And so they have been willingly giving their money to help on this intimate education of our students.

The next thing after we were safe enough to go ahead was to select the men who were to do this work. First of all we resolved that if the thing was to succeed at all, every member of the faculty already in the faculty who was qualified should take part in it, from the highest to the lowest officer of the staff of instruction, and that we should add to them men who would have the rank of assistant professors, but the function of this close individual teaching. In doing so we spent a great deal of time, had a great deal of travel done and a great deal of conference held in the departments, and then searched the country. We were able to pay only a moderate salary for this service, valuable as it is, say \$1500 to \$2000. That naturally cut us off from men who were not only good scholars, but had incumbent on them the support of a family. I must say that seemed a pity. It seemed like encouraging celibacy again, and that is of course a terrible thing to do. But there we were. Again, it brought us face to face with this fact, that naturally

the preceptors we should choose would be younger men as a rule, men say from twenty-eight to thirty-five years of age,—that has been about the run of it,—men, however, who had had thoro education, who had shown real scholarship, who had also shown that they were accessible, engaging, interesting men, who naturally loved students. I may say in the department of which I am a member we considered 74 names, out of which 10 were chosen. We are fully conscious that some of those who were not chosen were not chosen solely because they had been guilty of the atrocious crime of being married, but that was their fault and not ours. Still, leaving that out of account, we made a thoro search, and as a result last year—and if I may, let me add in the figures for this year—we have added over 50 men to the instructional force.

Now, how did we go to work in apportioning their labor, and what sort of labor is it? In the first place, let me say negatively a few things. Our preceptorial plan is not class instruction in very small divisions, excellent thing as that is. In the next place, it is not “coaching” or tutoring individual students or small groups of students to pass examinations. What is it? Let us go back a minute and consider a college class. Take any class you like,—freshmen, sophomores, juniors, or seniors. Assume any number you please. Suppose we take a freshman class, say 300 men. Let us assume they are being taught in twelve sections or divisions of 25 students in the classroom, which is about our practice in the freshman year. What then? How does the preceptorial work touch them?

I may say incidentally that it was clear immediately we could not do one thing that Oxford did, a thing, by the way, which seems to me a great advantage in the Oxford plan. We could not find preceptors or tutors who could guide any given student in all his studies. Of course you realize that this is done in Oxford. The students of the University of Oxford divide into two sets, the Passmen, those who are striving simply to pass, and the Classmen, those who are striving for honors. The Passman has a very limited range of subjects. In Oxford the student who will not work is given very little freedom,

an idea which does seem to me well worthy of imitation here. Freedom is for the man who will work. The Classman is the man who will work. Very good. Your Passman enters Oxford, has his classics, his mathematics, his elements of natural philosophy and logic, and so on,—practically a very limited range to begin with. Their system of education trains men who can supervise that restricted range of studies. So could our men, if that had been our mode of training. But it has not been. It would take some time to get it established, if it were necessary to establish it.

The Classman in Oxford concentrates his work in some one important field, such as modern history, *literæ humaniores*, or natural science, and he has one person to guide him in that field. That is the way they provide for the Classmen.

Now, we solved our problem in the following way. Our freshmen and sophomores are to have, and do have, one hour a week with the preceptor in each leading subject. For example, freshmen who are candidates for the degree of B. A. have one hour a week preceptorially in Latin, one in Greek, one in mathematics, one in his modern languages, one in English. Our freshman candidate for the degree of Bachelor of Science will have one preceptorial hour a week in his Latin, one in his French, one in his German, one in his mathematics, one in his physics, and one in his English. Altho it is not rigorously true,—it is not quite true of freshmen,—let us assume what is the fact now generally in the course of study that we have the fifteen hour schedule, composed of five three-hour courses. We take one hour off the classroom instruction and give it to preceptorial work, so that in a three-hour course there will be two hours in the classroom and one hour with the preceptor.

Now let us see how the preceptorial hour works in a particular course and in the freshman year, tho the unit there happens to be four hours in some subjects and two in others. How do we do it? It is mechanically practicable to take a class division of twenty-five men in any course and schedule them, say on Monday, Tuesday, Wednesday,—three hours. The first and second of these hours go to class instruction, the

third hour to preceptorial work. But how? In the following way. Take that division of twenty-five, break it into six little clumps of say four students each, and put six preceptors simultaneously at work during that third hour. That is an obvious, simple, mechanical device, but one which is to us of the greatest service. We can of course get any class division of twenty-five freshmen fairly homogeneous. We then divide the division into six groups, which will average four men apiece, and that is on the whole the prevailing unit, preceptorial groups of four men. We did not quite get to "blocks of five." We should be pleased to have groups of three, if we could have enough preceptors to attend to them, or even two, or one,—but we have not.

Now it is evident that in any well regulated time-table you can divide 300 students in any subject into twelve homogeneous divisions of 25, provided you arrange things so that each leading subject divides independently of the others, and solely according to the merits of the men in that subject. Your first or highest division will thus contain the very finest students. Your second division will be, on the whole, the next finest set. And as you go on down your list of divisions you soon begin to get to high mediocrity, then dull mediocrity, deadly mediocrity, hopeless inferiority, and at last the abyss. At the top you have the homogeneity of knowledge as the common distinguishing mark; at the bottom you have the heterogeneity of ignorance. At the top there is no trouble; because all know, know well and know together, and go like race horses. We never have had trouble with any top division. At the bottom it is not so much a question of finding out the sum of what they know, but of finding out the character of the ignorance with which you have to deal in each case. If you can diagnose that, then you can save the lowest division.

How interesting the lowest division is! Give me the head and tail of a class, rather than the middle. At the top are the fine-spirited fellows, who cannot be held in,—who need the rein. In the lowest division they need the spur. That lowest division, tho, whatever the subject is, contains those who are most evidently, painfully, woefully, in need of preceptorial

instruction. Yet it contains some of the most interesting and lovable fellows that ever come to college. That lowest division contains the mature fellow, with slow mind and poor preparation, who is trying hard. It contains the young fellow who has gotten too quickly into college and is only half ready for the burden. It also contains the really able fellow, who has had a good preparation, but does not mean to study. Those are the three kinds. I think there are no other kinds found in the lowest division.

Well, then what? Take any of those class divisions—high or low. Assume that each division of twenty-five men is as homogeneous as it can be made. Then take each division and break it into six clumps, clusters, little tiny groups or sets of four students, and you are able, if you put six preceptors at work simultaneously, each with one of the clumps of four, to reach the entire class-division at the same hour. It is also possible to shift any individual back and forth from one to another of these preceptorial groups, if occasion arises. What then? During the first two or three weeks of the term the individual students in the preceptorial groups which compose that lowest division—and there is the whole crucial test, of course—usually have to be taken tandem. They are all alike in being deficient, but unlike in the kind of ignorance they show. If you have an hour for four such men, give each one fifteen minutes, the first day. Perhaps a week or two later you will be able to put two of them together, and the other two will still be taken separately. Perhaps you will find one of your colleagues has a man he would like to trade with you. Perhaps you can make the shift. Of course these six preceptors can easily meet, talk over their little blocks of four, and in the course of a month, the blocks of four may be so redistributed as to assume something of homogeneity. If, for example, it be even the man who cannot tell the difference in algebra between multiplication and addition, as I fear some cannot, or if it be the person who cannot master the irregular verbs in Latin, as even the poet Heine admitted with tears he could not,—no matter who it is, we have now gotten hold of the means of sorting him as

nearly as possible into the exact place where he belongs. And of course as a month passes on, or two months pass on, more and more this group of men who are badly deficient, this little set of four, have been put together, perhaps shifted round from one group into another, till they have got into just the right place, and they are being treated by some one who is guide, philosopher, friend, critic, doctor, and politician all in one,—and in a short time those students show the result.

Now, how do they show the result? I said this was not a system of class instruction by small divisions, and that it was not a system of coaching for examination. What is it? It is not in any sense coaching or tutoring on the course of study to which the preceptorial hour is related; but it is reënforcing the course of study by instruction, so to speak, “on the side.” Let us suppose a case of a student in Latin. He comes to reading his Livy. He has fallen into the Serbonian bog of trouble, namely, the subjunctive. I don’t care how lamentable his difficulty, his preceptor takes him and makes the difficulty as plain as he can make it by talking straight from one man to the other. He sets him something to write. He sets him to “making his Latines” as—who was it? the great old school-master, Roger Ascham, said, “making his Latines.” And so in a short time he is taken out of the bog, his feet are set on a rock, and a song of rejoicing is in his mouth. In other words, in the course in Livy, the preceptorial hour is given to instruction of freshmen in the Latin language, according to the individual need of each one. The stuff that is used to teach him the language is the text of Livy, and his illustrations will be taken, his examples taken, the stuff out of which some English will be given for him to make into Latin, if you like, will be taken from Livy, and in that sense it is related directly to the course. And yet perhaps no two men, certainly no two blocks of students, have precisely the same area of instruction. The area of the preceptor’s effort is the varying area of each student’s special need.

Let us recapitulate for a moment. We can divide the three hundred into twelve homogeneous class divisions. We can divide each class division into six preceptorial groups, accord-

ing to the example I have given. Now, that is not the rule in all departments. In some departments we have not enough men to do that, but something of that sort is our aim, and to a very large degree we are realizing that aim.

How did we know the students were going to like it? We did not. When the first academic procession of the faculty took place, with the host of new preceptors added, the university turned out as tho to see what sort of a new reënforcement we had secured for our intellectual football team. The curiosity with which our students watched the rejuvenated faculty was well worth looking at.

To go on with our theme: No preceptor marks his students on their preceptorial work. No student is bound to be there, but if he is not there he will not be examined. What a combination of foreordination and election it is! If the preceptor cannot say his preceptee—pardon the word “preceptee”—has tried to do satisfactory work during the term, the Department is not likely to examine him. What a lot of trouble that saves! I have in mind, however, the first result, at the end of the first term when this plan was started last year. In one Department, which enrolled seven hundred students, the total number of men who had to be excluded from examination, because they had not attended to the preceptorial work with sufficient fidelity and intelligence to satisfy the Department, was only sixteen. We never had such a record in our history. Why? First, because the men found study interesting; second, because they liked the men who taught them; and, third, because they knew it was fair that the university should not waste its time on them if they did not respond.

Many interesting things have grown out of this. Students are wonderfully complex beings,—frank, irreverent, loyal, careless, optimistic, adventurous, lovable,—boys turning into men. They begin to establish their own traditions, what they call immemorial traditions, which are made very quickly in college life, a college generation being only four years, and the memory of a college generation being just four years long. What then? After a while the fellows get to thinking, “Well, what a really pleasant thing this is. We four are just a

little club, with Professor So-and-so up in his room. If we want to smoke we can do it." Nothing is said about that,—nothing said one way or the other. "We sit around the table. We go over questions of interest. One is set to criticising the other, he to criticising all of us." What happens in the term? Perhaps somebody is dropped out of that group, perhaps dropped out of college. For whatever reason, he has disappeared. A new one enters. He is received with curious feelings. "What business has he to come into our group? This belongs to us. This is our privilege." I would not destroy that feeling in their minds for anything, the feeling that they have something that is their own, that they have got something worth while. That is a good thing. "And who is this man to come in?" is a very pardonable question for them to ask. How much better than if they were all scurrying to get out of the group as fast as possible. What wonderful fellows students are!

There are some tests we can mention as indicating the immediate effect of the preceptorial teaching in its first year in Princeton. One is the test of the use of books in the university library. If there is anything obvious to be said about the intellectual condition of our American students today, it is that there is a sense in which they are illiterate. Splendid fellows,—but are they reading men? A man that does not like to read ought not to be called a student. How easy to read the newspapers, to read the athletic news, sometimes magazine articles, occasionally a book,—a novel. But is it true that this generation is brought up to read good literature? I am not a pessimist,—far from it. Yet when I see the statistics collected in various colleges showing the abysmal ignorance that exists regarding the greatest book of our literature, the English Bible, somehow I feel that we have been losing good literature in our homes, in our intercourse, in our colleges, in all our life. Now, one of the charming and delightful sides of this preceptorial question is the strong emphasis we lay on reading, particularly in the upper years, and to some extent in the lower years. Perhaps we are giving them too much to read; I fear we are. In our desire to make things work, we are crowding them a little.

The university library proceeded to get plenty of sets of books, so that our students should not be compelled to spend their money too freely on the books that were set alongside of their courses. It kept account of the books that were used. The average use of the university library on the part of undergraduates the first term the preceptorial system went into effect increased heavily. I think we can say that the books that were taken out in abundance were books of history, books of philosophy, books of literature, books of science,—books that ought to be the natural reading of a man who calls himself a student.

A second, and even a more subtle test, is the changing character of conversation on the campus, at the so-called “eating-clubs,”—what a dreadful name for a club! Things intellectual are now in good form—if spoken of without affectation. I could tell stories of students whom I know well that would come only too close home. Some of them had got in the way of thinking that it was not the thing, you know, to be studying too much; the thing was to enjoy your good comradeship, to study some, as much as might become a gentleman,—no more,—but not to throw yourself heart and soul into the best knowledge, not to make the acquaintance of the great masters of thought and fancy, not to open the mind, but to grow up, as one very wise English critic said, with “undeveloped mind,” with boys’ minds in men’s bodies. That is changing. The talk is more and more of things intellectual. Even tangents and cosines sometimes fly around the campus. I don’t mean for a moment to say that they won’t talk a lot of other things,—far from it. I do mean to say that there is some talk of these things daily at the table, in the walking by twos and threes, in animated informal discussion,—just the thing we want. And out of that is coming—what? I fully believe there is coming the recovery of the lost art of conversation.

Then a third thing, and I have done. Perhaps the most visibly notable thing is the effect on the university when evening comes. A great number of lights in the rooms, the comparative absence of strolling, roaming crowds,—the greater quietude,—the general air. What shall I say? Is it

the atmosphere of study that is brooding and settling over the old halls in the evening? I think it is.

Now, ladies and gentlemen, as far as a man can try who believes in a thing so much that he is in danger of speaking as an advocate rather than as a judge, I have tried to state fairly, if I could, the results of our first year. It has succeeded beyond what we expected. It has not fully succeeded yet. Many difficulties arise from the first application that have still to be worked out. But we are so encouraged as to believe that we are recovering, at least for Princeton, the lost priceless benefit of the small college in the larger university. If so, we somehow feel that we are doing the rank and file of our students a greater service than by any other device we can think of to put in operation—any device that is in any way within our reach.

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VIII

PROBLEMS OF EDUCATIONAL ADMINISTRATION ¹

By every token education is a dominant interest with the nations of today. Education in the large sense of the word, not mere school teaching, is a chief charge upon the public treasuries everywhere; it is debated as earnestly, indeed sometimes as violently, as was philosophy by the Athenians of Pericles or the rights of man by the frequenters of the salons in the days of Diderot and Rousseau. Since Home Rule, no public question has so shaken England as that of education. Prussia, after a violent struggle, has enacted a new elementary school law; and it would not be hard to prove that the present controversy between Church and State in France is a sequel of the educational debates of a quarter-century ago.

It is by no means clear to every one that the fundamental assumption which underlies this present-day interest in education, is correct. This tacit assumption is that as children are trained, so will they remain; that what they learn they will remember and use. One social reform movement after another seeks to make use of the schools, because all social reform movements make this assumption. Yet the shocking and vulgar English that one hears on every hand is too often spoken by men and women who as boys and girls were taught the spoken and written language correctly. From 1850 to 1880 the elementary schools of France were almost wholly under clerical, or at least religious, influence; and yet it was the boys there trained who, as men, made possible by their voices and their votes the successful attack on religion in the schools which made Paul Bert famous. Evidently there are some missing factors that must be reckoned with. The parable of the sower might have given a hint as to where to look for an

¹ An Address delivered at the University Convocation, Albany, N. Y., October 26, 1906.

explanation of some obvious facts, but it has not often been resorted to for that purpose. Not all seed falls into good ground and brings forth fruit; the wayside, the stony places, and the thorns still exist in human minds and in human hearts.

Quite apart, however, from the dubious character of this underlying assumption, the dominant interest in education remains an uncontested fact.

To meet the cost and to control the policy of education have almost everywhere become, at least in large part, functions of government. In a democracy a government, to be truly representative, must work for the accomplishment of a people's highest ideals, and it must also reflect the public opinion of the State or nation whose government it is. The more highly civilized men are, the more closely will these two aims harmonize.

Just here lies the first and chief problem of all educational administration. It must, to be genuinely efficient, seek the highest aims; to be representative and to gain support, it must reflect public opinion. To do both at once is not always easy; sometimes perhaps it is not even possible. It is plain, however, that within certain limits men wish and expect schools to do better for their children than they have been able to do for themselves. At intervals a parent is found who thinks—or at least, who says—that what was good enough for him ought to be good enough for his children; but he is an exception. In the vast majority of cases, parents wish the very best for their children, regardless of what their own experience may have been. A community of Fagins would hardly maintain a school system whose aim was to turn their children into Artful Dodgers. On the contrary, they would be quite likely to insist on the teaching of the Shorter Catechism, perhaps even on “scientific temperance.”

The far-sighted administrator of education recognizes these facts and makes his appeal to the higher and larger nature of man. We Americans have not been generally considered an idealistic people; yet nowhere in the world has a truly spiritual view and interpretation of education been so influential as among us. For forty years every important leader of Ameri-

can educational thought has been expounding education as a phase of spiritual evolution, and today that philosophy is absolutely controlling, consciously or unconsciously, in tens of thousands of American schoolrooms. It vitalizes the kindergartens and the elementary schools in every corner of the land. It reaches up into secondary schools and occasionally even into a college. It is the one true view, and upon it as a cornerstone educational administration must build.

This point is mentioned first, because not infrequently educational administration comes to be looked on as an end in itself, instead of merely as a means to an end. The end is the ideal aim of education, not the machinery by which that aim is sought. Some wit has defined administration as doing extremely well what should not be done at all. That wit is in the way of being an anarchist, but when one sees the elaborate and costly machines that are sometimes built to crack eggs with very thin shells, he feels like urging the wit on just a little.

In my view, therefore, the first and chief problem of educational administration, whether of a school system or of a single institution, is to seize intelligent hold of the conception of education as a phase of spiritual evolution of the individual and of the race, and to labor earnestly and unceasingly for the support, the extension, and the effective working out of this conception. This conception of education will vitalize all administrative machinery. Without it, the administrative procedure becomes dull, routine, and sterile.

Let us fix our eyes for a moment upon our own State. It is truly an empire. Within its borders are gathered eight million human beings, coming themselves or thru ancestry, from every corner of the earth. All races, all tongues, all forms of religious and political belief, all sorts and kinds of industry and commerce are represented among them. The small farmer, living remote from telegraph or railroad, and the captain of industry or finance with his hand and eye on the markets and exchanges of the world, are alike on our rolls of citizenship. Guiding and controlling this composite body politic is a set of traditions, ideas, and ideals, which are recognized everywhere as American, grown in our case out of Dutch

and English beginnings. Our body politic, huge and composite as it is, and various and complicated as are its interests, is a political unity and a political unit. It is a commonwealth, a State, with its share of American sovereignty.

This body politic, among other things, sets itself the task of educating its children. A system of educational administration is at once called into being; and it is only the administrator who understands these presuppositions, who can be trusted successfully to solve its problems.

Our State has an educational system which is made up of three elements:

The first element is the schools, institutions, and undertakings of every form and type which are supported by public tax and which are immediately controlled by public officials.

The second element is the schools, institutions and undertakings of every form and type, which, while neither supported by public tax nor immediately controlled by public officials, are established and maintained by the State's authority and permission, granted either by specific legislative enactment or in pursuance of general provisions of law. Both these elements of the educational system are public in the full sense of the word. They represent the public judgment, and base their existence directly on public authority exercised thru government. The fact that one of these elements is tax-supported and the other not, that one is directly controlled by public officials and the other not, simply indicates that the State stands in a somewhat different relation to each, not that it stands in a definite relation to the one and has no relation to the other. In a civilized community a private university, for example, ought to be as unthinkable as a private legislature or a private court of appeals.

The third element in the educational system is, however, private. It includes the schools, institutions, and undertakings, which are without specific governmental sanction or authority, but which exist because they are not forbidden. They fall within the sphere of liberty, not within the sphere of government, which two spheres added together make up the entire activity of the State. These are the private educational in-

stitutions and undertakings of our State; for while the State thru its government holds itself free to enter upon any part of the educational field, it puts no obstacle in the way of its citizens doing the same thing, whether as individuals or as groups.

Perhaps the remainder of the entire problem of educational administration in the State of New York may be summed up by saying that it is to secure the highest efficiency of all three of these elements in the educational system and their increasing coöperation. The ways and means by which the Department of Education will proceed to secure efficiency and coöperation will differ according as its efforts are directed toward one or another of the three classes of institutions. With the third or private element in the State's educational system, the influence of the Department of Education will be exercised by persuasion, by conveying information, and by holding up ideals. With the first and second elements, the Department of Education may deal more directly in ways which are fully set out in the Statutes of the State and in ordinances adopted in conformity thereto by the Regents of the University of the State of New York. Within the limits of the class of institutions first named, those supported by public tax, the authority of the Department of Education is direct and unquestioned.

It is of prime importance to recognize and to compel recognition of the fact that each one of these three elements in the State's educational system owes a responsibility to the public. Because a school is a purely private undertaking, even if it is conducted entirely or largely for gain, it should not be overlooked or neglected. The State's officials may not compel improvements, but they should not withhold counsel and stimulus. The same may be said in regard to the second element in the educational system. The ways in which the State's officials may directly control the working of these institutions are not many. Nevertheless, these institutions constitute a numerous and important body of educational workers and they represent a powerful educational opinion.

When any exercise of the central authority is contemplated, however, the fact will always be borne in mind that local self-

government is an element of prime importance in the institutions of our people. Those schools will flourish most vigorously and will exercise the widest influence, which respond to local needs and which are under local or neighborhood control. The wise central authority, therefore, seeks not to supplant local initiative and local control, but to develop, to strengthen, and when necessary, to supplement them. It would doubtless be possible to secure a very desirable efficiency and a very undesirable uniformity in the schools of the State by vigorous exercise of central authority, but these schools would cease in large measure to be truly public schools. They would cease to represent the best public opinion of their localities and they would fail to enlist warm public sympathy and support. They would seem to be alien things grafted on to a community's life, and not the full and rich flower of that life. Sometimes it is necessary to bear with a temporary evil in order to secure a larger and permanent good. There are many short-cuts to reform by exercise of autocratic power. Reforms autocratically effected do not, however, often last long. When the support of authority is withdrawn, the fabric erected by its aid falls to the ground.

On the other hand, it must never be forgotten that in addition to being residents of a locality, we are citizens of a State. It is to the sovereignty of that State that we appeal, and not to any power legally inherent in the residents of a locality, when we ask for a public tax to support public education. It is the State, therefore, in all its unity, which is underneath and behind every tax-supported educational institution within its bounds. The State's authority has been invoked to bring the school into being and the State's authority must be invoked to keep it efficient. It is the citizenship of the entire State which suffers thru the illiteracy, the ignorance, or the vice of a part of its citizenship. It is of little value to the residents of one county to be intelligent, law-abiding, and eager in support of schools, if their influence is counterbalanced by that of the residents of another county who are in large part illiterate, boisterous, and contemptuous of education.

Just here lies one of the difficult tasks of educational states-

manship. The administrator must know when it is wise for central authority to be exercised directly and when it is wise to withhold its exercise that local initiative and control may be developed and strengthened. In a sense, communities may be said to be wards of the State. The State fixes the minimum standard of scholastic excellence and the minimum standard of efficiency in every part of the school's work. When the locality maintains or surpasses that minimum standard, the State may well refrain from interference with its activities. When, on the other hand, a community falls short of such standards, then the State's officials must vigorously intervene to bring the schools of that locality up to the mark.

A prime consideration in dealing with the efficiency of an educational system is the material factor, finance. Is a State, or a community, raising enough money for schools to provide buildings in sufficient number and of proper character, to secure adequate and properly prepared teachers, to maintain an effective system of supervision? All over this State, particularly in the urban communities, the expenditures for public education are very large; yet he would be a bold man who would say that our schools are in all respects well provided for. Even when the school buildings are sufficient in number and of proper character, the salaries of teachers are on a scale that suggests missionary work rather than professional service requiring careful preparation and long special training. Some day we Americans will have to face the question whether under existing systems of taxation and the distribution of taxes, communities, particularly the larger ones, can really afford to give their children the education which present-day standards suggest and demand. Few States can follow the example of New Jersey, which out of the surplus revenue received from franchise and corporation taxes, is able to make allotments to counties and towns in aid of the schools. The readjustment which must surely come before there can be any really important increase in teachers' salaries generally, will, in my judgment, come more quickly if we fix our attention on a wider and better preparation for the work of teaching rather than agitate for larger salaries regardless of standards of profes-

sional preparation. To be worth more is the easiest way to get more. In every other branch of professional activity, more adequate preparation and demonstrated success are almost a guarantee of increased compensation. Why should teaching be a permanent exception to this rule?

The wise administrator of education will study carefully the financial aspect of his problem. He will examine and consider the sources from which the revenues for education are derived, and he will know when those sources are yielding all that can equitably be demanded of them. He will temper the insistence of his demands upon the legislature with reasonableness. He will insist upon that economy which is becoming in the expenditure of all public funds. Mr. Gladstone when Chancellor of the Exchequer was not afraid to say that economy was the first and great article of his financial creed. In an impressive passage Mr. Lecky once wrote:

"Nations seldom realize till too late how prominent a part a sound system of finance holds among the vital elements of national stability and well-being; how few political changes are worth purchasing by its sacrifice; how widely and seriously human happiness is affected by the downfall or the perturbation of national credit, or by excessive, injudicious, and unjust taxation."

In our zeal for education we must not overlook the dictates of a sound system of public finance. The form of our national and State government does not lend itself to scientific budgets or to any other than a haphazard system of financial administration. We are far behind England, and also behind France and Germany, in this respect. We take little thought of to-morrow and not too much thought of to-day. Get all you can and spend all you get, is a popular maxim; but it is not a wise or a statesmanlike one. Educational administration in pursuit of a high purpose cannot adopt it as a controlling principle. The material resources of the people and the equitable distribution of public burdens among them are always to be reckoned with.

It is part of the business of educational administration, moreover, to protect and honor that elusive but all-important thing called personality. Thomas Arnold, who possessed it in high

degree and whose fame rests upon his possession of it, once wrote in quest of a teacher and said: "I want a man who is a Christian and a gentleman, and one who has common sense and understands boys. I prefer activity of mind and interest to high scholarship; for the one may be acquired far more easily than the other. Then he should have sufficient vigor of mind and thirst of knowledge to persist in adding to his own stores without neglecting the full improvement of those whom he is teaching." We cannot have too many such men and women as Dr. Arnold describes in the teaching profession. It is farthest from my thought to decry scholarship, but scholarship, like charity, sometimes covers a multitude of sins. It is one, but not the sole, qualification of a teacher. In attempting to do even-handed justice among a large number of candidates and to bring order out of chaos in the appointment and advancement of teachers, systems of competitive examination have been devised which must be watched with scrupulous care, lest they defeat their purpose. Personality will often irradiate a schoolroom and touch every mind and heart in it, when mere scholarship would chill and repel. No administrative excuse can be accepted in extenuation of the neglect of personality as a factor in the equipment of the teacher. If personality be neglected, the schools will soon become treadmills.

Yet another task of the administrator is to keep steadily before his constituency and before the public at large the conception of teaching as a professional service rendered not only to the particular school or college, but to the people as a whole. Teachers are public servants in every sense, and are entitled to regard and esteem as such. To treat a teaching position as a job, to be bestowed upon the needy or handed out to a friend, competent or incompetent, is to debase and degrade education. Only a little less humiliating is the notion that "home talent" is to be preferred in the service of the schools, regardless of relative merit. This notion is especially comic in a country like our own, with a population of unusual instability, where almost every other person one meets has recently come from somewhere else. It is not many months since the city of Baltimore,—prosperous, intelligent, the seat of a university of

world-wide fame—lost the services of a most competent school officer because of the vigorous outcry of the newspapers and the small politicians against an “outsider.” Their conception of the post to be filled was that it was a job, not a place of professional dignity and responsibility. These vagaries will be outgrown as our civilization matures, and as the teaching profession comes to take its proper place not only on the lips but in the minds and hearts of the general public.

The educational administrator has before him a statesman’s task. He deals day by day with great human forces and with interests of surpassing importance. His wisest work often produces little immediate result. He is building for the future and its hopes. If he is truly an educational administrator, not a tyro, he is not at sea drifting without chart or compass. He conceives education as a phase of spiritual evolution and as the means whereby the race perpetuates both its achievements and its ideals. By the standard of that conception, he measures all his acts and policies. He bends every energy to secure fullest coöperation between every element of the system or institution confided to his directing care, and to make them all efficient in their several tasks. He studies the resources at his disposal and so orders them that the public gains the largest service at the least cost. He throws his protecting arms about personality whenever he finds it, and assists its free expression and exercise. He teaches and illustrates in countless ways that teaching is truly a profession and that it may not be subordinated to selfish or partisan ends. He counsels, informs, and assists; he never compels or commands, save as a last resort and when vital interests are endangered. He must be ready and willing to take responsibility. His only masters, under the law or his grant of authority, must be his reason and his conscience.

NICHOLAS MURRAY BUTLER

COLUMBIA UNIVERSITY

IX

DISCUSSION

CREDIT FOR QUALITY IN THE UNIVERSITY OF NORTH DAKOTA

A short account of the plan for giving credit to quality as well as quantity of work at the University of North Dakota, on trial now for over two years, may not be without interest or value to others interested in the problems of college courses and curriculums.

We had, of course, been interested in the current discussions about the shortening of the college curriculum and felt that, while cutting it down to two years was an extreme which would practically destroy the American college, there was much truth in the contentions of President Nicholas Murray Butler, and much reason and merit in the practice of Harvard, Columbia, and other institutions, in allowing students to complete the work of the college in less than four full years.

Our faculty were quite unanimous in thinking that many students are as well equipped in every way in which a college can equip them, at the end of the sophomore year, if not before, as others would be should they remain there a dozen years. But while they agreed that equipment is one element in determining worthiness for graduation, it seemed to them that the time element is also essential and that even the good or excellent student, for his own good, should remain, under the influences and in the liberalizing atmosphere of the college, in reasonably hard work for at least three years.

Recognizing the claim of ability and educational equipment on the one hand and that of the time element on the other, our Committee on University Interests discussed this problem of a feasible shortening of the college course for good and excellent students, which would not endanger either the existence of the traditional and time-honored American college or its standard.

It seemed to us that graduation has always meant, and means now, the official pronouncement or declaration, on the part of the college, that the candidate has attained a certain degree of education, culture, efficiency, as determined by its tests. It seemed to us also that this measure of education can be reached by some sooner than by others, either on account of native ability or of excellence due to hard and painstaking work. The Committee tried to harmonize, in a working plan, a reasonable time element with the recognition of superior power and attainments, by giving some credit for a high quality of work.

The Committee knew of no precedents, in the direction of a practical test of the plan; and yet the theory seemed to us so reasonable, so plausible, and so feasible that the Committee were convinced in their own minds of the wisdom of attempting to put it to the test. A plan was drawn up for submission to the general faculty about the middle of the scholastic year, 1902-3. The only voice that we had heard prior to that time in favor of giving credit for quality of work was that of President Wm. De Witt Hyde of Bowdoin in a magazine article written some months before.¹ The Committee after much discussion finally embodied this idea of President Hyde's in a plan which, after some modifications by the faculty, was adopted and went into effect at the University of North Dakota in September, 1904.

For a clear understanding of this plan in practical operation here, permit me to explain a few terms and give the setting. A *course*, with us, is a subject implying four hours a week in recitation for a year. The normal amount of work carried by each student is four such courses each year. Prior to 1903 each student in order to secure the B. A. degree had to complete four college courses each year for four years, making sixteen courses in all. Some of these courses have always been prescribed and the balance elective within prescribed limits. Our year was and is still divided into three terms, fall, winter, and spring. A *unit* or *credit* in 1902-3 was a term's work in a subject coming in recitation four times a week. Three terms'

¹ *Outlook* for August, 1902, p. 886-9.

work, or a course, would give three units; sixteen courses or forty-eight units were required for graduation. This would represent one hundred and twenty-eight "points" where the point represents one hour a week for a semester.

The plan adopted for the year 1903-4 was as follows: Students were reported by instructors at the end of each term in four different grades, viz.: Excellent (marked *x*), good (*g*), fair (*f*), and pass (*p*); if marked *c* they were conditioned (not passed, but allowed to make up the work outside and take another examination); if marked *F* they failed and had to take the work over in class. Under the old plan every student whether passable, fair, good, or excellent received just the same credit for his work; that is, he received one (1) credit, or unit, for his term's work in each full subject. Under the new plan an *x* was credited 1.3; a *g*, 1.2; an *f*, 1.1; and a *p*, 1. If a student were uniformly good (*g*) he might, in addition to his four regular courses, do honor work in connection with some one of them for two years, receiving for it .2 credit each term. This would be special, outside, intensive work in connection with some one course in which he was interested, and was done under the instructor in charge of the course. It will be seen that the uniformly excellent (*x*) student could possibly finish the required 48 units in three years. One term would give 4×1.3 , or 5.2; and three terms or one year, would give 3×5.2 , or 15.6. Three years would give 3×15.6 or 46.8; honor work for two of the three years would add $2 \times .6$, or 1.2 more, making the 48 units. But if excellence is largely natural rather than acquired by hard study, the uniformly good (*g*) student even could complete the course in three years by carrying four and one-half courses each year, as he might be allowed to do for reasons. The good (*g*) student carrying four and one-half courses for one term would secure $4 \text{ } 1\text{-}2 \times 1.2$, or 5.4; and for one year, 3×5.4 , or 16.2; and for three years, 48.6.

I would say that instructors reported students simply by the symbols *x*, *g*, *f*, *p*, *c*, and *F*, and the proper values were assigned and recorded by the registrar in the office. While it may appear like complicated figuring, it is really simple in its practical workings.

There were some weaknesses in the working of the practical details of the above scheme. This was to be expected. While we felt sure in regard to the pedagogical soundness of the main underlying principles, we were conscious from the first that the detailed working of the plan was on trial. Before adopting the plan, and when we marked in per cents., it was noticed that standards differed much; some instructors uniformly marking higher than others even for students acknowledged to come in the same class when characterized in popular language as passable, fair, good, or excellent. In fact, some of us felt that if the merely passable student received as much credit as the excellent student, it would be best to report all students simply as *satisfactory* or *unsatisfactory* and let it go at that. It would eliminate the only partly suppressed imputations of partiality, on the part of students, and our own half-conscious dishonesty in trying to distinguish between 84 per cent. and 85 per cent.

But while it is difficult to make such fine distinctions it appeared to us that we could, with comparative ease, put students above the satisfactory line into four great classes, or grades—pass, fair, good, and excellent. Some favored only three and others five such grades, but the four-grade plan finally prevailed.

In the practical working of the plan during the years 1903-4 and 1904-5 some members of the faculty thought that too many would be able to complete the curriculum in three years and that there would result a lowering of the standard. In the year 1903-4 about 15 per cent. of students in classes were reported excellent and about 35 per cent., good. This would no doubt extend the three-year opportunity to many who do not deserve it, for students were getting credit for quality in every course reported *x*, *g*, or *f* regardless of the kind of work done in other courses, even if conditioned therein. The student marked uniformly fair was also receiving credit for quality. These were mistakes. The "fair" student came to be thought of as one who did little better, if any, than pass, and as one who should certainly be required to take four years for his degree. Experience thus showed that "fair" deserved no extra credit for quality. Students too who were allowed to pursue five

studies might neglect work in a couple of them, getting a pass or a fair by mere sponging in the class, and good or excellent in the other three, thus rolling up a big total for the term. This was also felt to be a mistake.

While our Committee were again discussing ways and means of remedying these defects Columbia University came to our rescue.² The plan adopted there of penalizing a student for too many "fairs" by knocking out credit for quality in any subject, and of doubly penalizing him for too many mere "passes" seemed to us a specific for the two ills above mentioned and we appropriated the plan with slight modifications.

Instead of using the descriptive, or characterizing symbols, *x*, *g*, *f*, and *p* for excellent, good, fair, and pass, we also adopted the letters A, B, C, and D for the corresponding classes or grades. It seemed best to eliminate the descriptive coloring and to use mere abstract symbols; and also to use the symbols more generally used in educational institutions.

In our revised plan a term's work in class A gives 1.3, and in B, 1.2 as before. But C (the old *f*) is lowered in value to indicate what it proved by experience to be and = 1 (only); the D (almost the old *p*) = 1, unless a student gets more than two of them; in that case only two of the D's count. Two D's (or worse) will knock out any credit a student might otherwise be entitled to for quality in other subjects. It seemed to us that Columbia, however, went to an extreme in penalizing and did not leave sufficient room for the play of possible bias and errors on the part of instructors. Columbia's working out of these details may, however, be the better.

The following table will show at a glance the possibilities of our plan:

Grades	Credits		
	One subject for a term.	4 1-2 subjects for a term.	For 3 terms.
A	1.3	5.85	17.55
B	1.2	5.4	16.2
C	1	4.5	13.5
D	1	2 (Only 2 count)	6

The above is on the supposition that the student for the

² See Professor Calvin Thomas's article in the *EDUCATIONAL REVIEW* for April, 1905, on a new "Program of Studies at Columbia."

term and year is uniformly A, B, C, or D. We require in all, for graduation, 50 units, or credits. We give some credit for physical culture, including athletics—one-third, or one unit for each of two years. So the B student carrying four and one-half courses (eighteen hours per week of class work) could secure in three years, 3×16.2 or 48.6 which with physical culture, oratory, debate or honor work, would bring the total up to 50 credits. The student who is uniformly C will need four years, while the D student will need to remain as long as eight years to secure his degree.

It would seem that Harvard University has also been discussing for some time the feasibility of a plan for crediting quality. President Eliot at the annual dinner of the Associated Clubs, May 27, 1905, said in explaining Professor Richards' plan for giving credit for quality and thus making it possible for students of superior ability or application to complete the Harvard course in three years: "You perceive that here is a method of counting both quantity and quality, and of allowing either to dominate in winning the goal. The ingenious scheme of Professor Richards is about to come before the Faculty; but if you will turn to your Committee's report which Mr. Rome G. Brown laid before you to-day you will find that the University of North Dakota invented it before Professor Richards, not in just the same form, because forms vary with the usages of different institutions, but the conception is the same.

"What we want at Cambridge is a three years' course which will mean as much study, as much attainment, as much acquired power as the four years' course has ever meant."

This plan, inaugurated by the University of North Dakota in 1902-3, was explained by President Merrifield at a meeting of college presidents called by President James and held at Northwestern University in May, 1903; it is likely that the subject became thenceforth a topic for discussion in many institutions. It is, of course, gratifying to note that a theory which seemed to us at the time we attempted to realize it, eminently sound should commend itself to the larger and possibly more conservative institutions as one worthy a fair trial in actual practice. We have, I grant, had our doubts and fears, know-

ing well that many a promising theory lies high and dry on the shoals of the past; but knowing also that the best way to test a theory is to attempt to realize it in practice, we determined to try it, and thus far can truthfully say that it is working itself out in desirable results—in more and better work than under the old plan, when the lock-step was in vogue and the excellent student was yoked up with the one who merely “scraped” thru. We are glad to see that other institutions are beginning to help test the case by experiment and observation, the true method of scientific investigation.

From observation and experience during the year just closing it is my belief that there should be no double penalizing for D's. It refines and complicates matters, and seems unjust. If a D passes in a subject under some conditions, it should under all. It would, however, be just to say that anything worse than one D should forfeit to the student all credit for quality.

JOSEPH KENNEDY

UNIVERSITY OF NORTH DAKOTA

REVIEW

Congress of Arts and Science, Universal Exposition, St. Louis, 1904. Volume II. History of Politics and Economics ; History of Law ; History of Religion. Boston and New York: Houghton, Mifflin & Co., 1906. ix+661 p. \$2.50 net.

It is manifestly impossible to give in brief space a complete evaluation of a volume containing thirty-four papers upon as many different subjects. The distinguished names attached to many of the articles invite for them careful attention, but this review will attempt to point out only a few salient features of the collection. Under the general rubric "Historical science" are gathered the papers read before the St. Louis Congress upon political and economic history, the history of law, and the history of religion. Under each of the subdivisions speakers were chosen to present the relations of their respective departments to other branches of historical knowledge, and others to exhibit the problems of today in each particular field. Under a variety of titles this plan has been consistently carried out, and the result is a noteworthy presentation of the theory and present conditions of the historical sciences. Almost every paper has something to say about the principles of historical research, and thus from numerous special standpoints appear the evidences of present-day practice in this form of investigation. There is on the whole a tone of exultation in the conquests accomplished, the new fields opened, and the old barriers torn down. Adverse criticism of certain tendencies is voiced, but there is no complaint that history is neglected except in the history of law. The marvelous industry of historical scholars is held up to view, and the reforms, when suggested, attempt to guide this energy into new and more profitable channels. President Woodrow Wilson believes that it is now time to divert the rising investigators from the monograph to the larger view of history. Historical

synthesis is to him the crying need of this age of minute research. Without controverting this position Professor C. W. Colby points out the pitfalls of this process, and recites a series of entertaining examples of the personal equation in the histories of noted writers. Professor W. M. Sloane describes the advancement of history in the nineteenth century, using Macaulay, Ranke, Taine, and Bancroft in illustration of the tendencies of that period. Almost every position now assumed by historical science has been won during that century. Along with other sciences grounded in the concept of organic evolution it has differentiated its proper field of work and laid the basis for further advancement. Professor J. H. Robinson discusses the relations between history and literature, and with many skilful touches of literary art points out the ill effects of literary ideals upon historical writers. For one grievance, he charges the division of history into definite periods to the dramatic instinct, which desires crises and ignores the continuity of history. A more serious fault is the persistent repetition of disproved events, which survive because of their literary value in a narrative. Mr. Robinson hopes that some day psychology will come to the rescue of history. Professor Lamprecht of Leipzig, a little further on, believes that the rescue has been effected. "History in itself is nothing but applied psychology. Hence we must look to theoretical psychology to give us the clew to its true interpretation." If Mr. Robinson is in search of historical work undefiled by literary art here is a sample. The abstractions clothed in ponderous phraseology can only be compared with Lamprecht's recent volume entitled *What is history*, a book in which numerous valuable ideas have been irretrievably entombed. Professor George B. Adams reviews the present problems of mediæval history and very properly concludes that the more fruitful fields for new research lie in the second half of that period. It is not likely that anything fundamentally new will be found concerning the origins and early institutions of modern nations. Mr. John B. Bury, who is Professor of Modern History in Cambridge, England, and who writes and edits many books about the Roman Empire and the Middle Ages, is con-

vinced that modern history lays a pressing command upon the investigator, because we are nearer the events and can better appreciate the passions and feelings of the time than we can the ancient world. Professor Bourne of Yale, in pointing out the relation of American history to other fields of historical study, takes occasion to emphasize the value of Spanish-American history to the student of Europe and America alike. The connections with English and French history are more familiar, but Spanish colonization affords important examples in the adjustment of an old civilization to a new world. Professor F. J. Turner finds the most important problems in American history in the search for the economic and social causes which lie behind our political history. Many of these topics demand more adequate treatment.

Economic history is represented by Professor Conrad of Halle and Professor Patten of Pennsylvania. The growth of interest in economic history during the century is indeed phenomenal, but the investigation has been inadequate. In drawing the distinction between economic history and the economic interpretation of history Mr. Patten indicates methods of inquiry suggestive to the historian and to the economist as well.

The relation of the Roman law to the historical sciences is set forth in a charmingly written paper by Mr. W. H. Buckler, on the contributions of the Roman codes to the knowledge of ancient life. Politics, economic conditions, religion, literature, language, even art and architecture are illuminated by the study of that law. Professor Munroe Smith in stating the problems to be investigated urges that the period of highest development of the Roman law—about 250 B. C. to 250 A. D.—be studied by the comparative method. New material is not likely to be discovered, but comparison with the history of English-American law from the thirteenth century to the present day will yield fruitful results.

Notwithstanding all that has been written upon the history of the common law the subject has not been exhausted. Possibly we may look forward to another date of which it may be said, as of the year 1881, that nothing printed before that

time on the common law is worth reading. Professor Wigmore offers suggestions as to methods by which the study of legal history may be encouraged and the knowledge thus acquired may be widely disseminated.

The history of religion enlisted the services of some of the most prominent scholars now engaged in the subject. From abroad Hermann Oldenberg, Ignaz Goldziher, Karl Ferdinand Budde, Adolf Harnack, and Jean Reville represented Buddhism, Mohammedism, Judaism, and Christianity. These eminent specialists were ably seconded by American colleagues, and the papers presented in this volume form a substantial contribution to the historical sciences. The study of religion has not only adopted scientific method during the past century, but the results and the procedure are becoming indispensable to the investigator of other fields.

Bibliographies have been added to the principal divisions of the book, but with what end in view it is hard to say. They are neither complete nor discriminating. There are two sources of surprise and gratification in this Congress; first, that so eminent a body of men from widely diversified sciences could be brought together, and, second, that the managers have been able to publish the proceedings.

J. M. VINCENT

JOHNS HOPKINS UNIVERSITY

XI

NOTES AND NEWS

**Professor Sadler
on the English
Education Bill**

Professor Michael E. Sadler, whose illuminating article on the pending English Education bill was printed in the *EDUCATIONAL REVIEW* for September last, contributed to the London *Morning Post*, of October 22, a letter on "The House of Lords and the Education bill," which proposes a solution of the problems which is both statesmanlike and practical. Professor Sadler's letter is, as follows:

Is it beyond hope that even now our religious and political leaders may find for us some way of peace in regard to public education? The outlook is a little more favorable than it was. The long summer holiday has changed the situation. There is rather less tension of feeling. We seem to see the whole question in better perspective, and, as Mr. Mundella has said, in juster proportion. Even in the hottest circles of controversy people's minds are cooler than they were in July. Not, indeed, that the underlying difficulties are smaller than they were. On certain fundamental things there is no agreement, and no hope of surrender. But that this fact is now at length being realized is no cause for discouragement. It is really a ground of hope. The danger lay in each great party to the controversy thinking that it alone was unshakably fixed in its convictions, and that its opponents could be compulsorily persuaded to abandon their opinions or at least be made permanently uncomfortable for holding them. But now those who represent each group of conflicting opinion (or, rather, who represent the sentiment which, as Mark Pattison said, predetermines opinion) are aware that the other groups hold to their own point of view with a like tenacity and with equal readiness to maintain their conviction, even to the point of imprisonment. Who that has followed the course of events can fail to feel profound respect for those who have stood so firmly for each of the different principles at stake? English public life is the more vigorous and the healthier for the firm stand made on conscientious grounds by Dr. Clifford and Dr. Robertson Nicoll; by Archbishop Bourne and the Roman Catholic hierarchy; by the Bishop of Birmingham and the Bishop of Manchester. The division between them is fundamental, but each stands for a principle which must be recognized in any settlement. And for a settlement which will at any rate carry us on for the next ten or twenty years the demand is already strong, and will soon become impatient.

Men see that this long quarrel is hurting a cause they care for, and they feel that, if possible, a way should now be found of ending it. The wrangling has become tedious and tiresome, even to those who try not to forget what high things are at stake.

The Government Bill, whatever its defects, and the fine tone of Mr. Birrell's chief speeches in the course of the debates, have helped people to clear their minds upon many matters of great practical importance. First and foremost, it is plain that, whatever else happens, every teacher must be free from any shadow of compulsion to teach what he does not fully and heartily believe. To secure such perfect freedom of conscience on the part of the teacher is worth, in the interests of religion and of truth, any sacrifice of ancient privilege or of social prerogative. Secondly, it is unwise for any religious body or private interest to seem to offer any obstacle to the building up of a system of national education under public control. By a sure instinct modern communities feel that a sound educational system is vital to their welfare. The Churches are now being relieved from a heavy burden of organization which they undertook when the State was still unprepared to bear it. And by surrendering certain administrative responsibilities which can now be more effectively borne by the State the Churches will gain in spiritual influence over the democracy. Influence is apt to begin at the point at which privilege ends. Thirdly, education has a triple work, physical, intellectual, and spiritual. It must rest upon a belief. It must, to do its full work, be inspired by a faith in unseen things. To cut religious influences out of it is to mutilate it. We can no longer hold the old view that all teaching about the deepest things in life—God, duty, prayer—can be torn off from a school's work as the perforated margin can be torn from a sheet of stamps. Some presuppositions about these fundamental things are necessarily the watermark of the very fabric of education. But, fourthly, tho it is the duty of the State to recognize this inseparable connection between education and belief, it is disqualified from doing more than appointing a season within school hours at which beliefs shall be taught. The State as such cannot prescribe religious doctrine without peril to religion itself. It cannot usurp the place of the *Ecclesia docens*. It cannot override the individual conscience. Therefore, fifthly, the State should afford opportunity in every public school, within school hours, for religious teaching to be given to the children according to their parents' expressed wish and by teachers who voluntarily undertake the duty and are approved as competent for the work by the Church or Churches whose faith they teach. And it is expedient on many grounds that the whole cost of these different forms of religious teaching should be borne, not by the State or by local rates, but by the religious bodies concerned. But one of the two great forces in all educational work is the intense personal devotion of men and women who give their lives to service in schools which are thruout their work in intimate association with the life of some religious body. To preserve this force in the welter of our uncertainties is one of the chief tasks of a wise statesmanship. To antagonize it, save when it is politically implacable, is a grave error.

To attempt to eradicate it is folly. The modern State may take any one of four lines towards the different forms of this intense religious influence in education. It may ignore them. Or it may recognize them. Or it may recognize and inspect. Or it may recognize, inspect, and aid. The first is impracticable. The second is inadequate. The third results in a great deal of educational work being spiritually eager but intellectually half starved. The fourth plan combines efficiency and justice, provided that the State insists upon a publicly managed school, with varied opportunities of religious teaching, being within the reach of every child. No Church can bear the vast expense of maintaining a complete educational system, on lines of modern efficiency, side by side with that of the State. The competition is crushing. There must be co-operation with the State. But the State system will gain by the intellectual and moral stimulus afforded by the presence of a limited number of schools under independent management and free from the limitations of State control.

The Education Bill as it now stands is cumbrous and complicated. Can it not be simplified? Clause 4 is almost unworkably intricate. Why should it not disappear, and its place and that of clause 3 be taken by two new clauses embodying a practicable settlement? Such a settlement might provide (1) that in all schools under local public control (the vast majority of the schools of the future) there should be in school hours opportunity for religious instruction according to parental preference, but at the cost of the religious bodies concerned, the teachers on the staff being allowed to give such religious teaching if they desire, but being left absolutely free to decline to give it if they so prefer; and 2) that when there is another school under local public control within the reach of the children of the district, a school under religious or other corporate management should be allowed to receive State grants (but not rate aid) provided that the State is fully and regularly satisfied on four points: (1) The sufficiency and efficiency of the teaching staff; (2) their proper remuneration; (3) the fitness of the school buildings and equipment; and (4) the regular attendance of the children.



Progress in Philadelphia The Public Education Association of Philadelphia, which has for its object to promote the efficiency of public education in that city, and which has carried on its admirable work for twenty-five years, publishes in its 25th Annual Report an analysis of the new school law and a series of subcommittee reports, which are full of suggestion and help for similar organizations in other communities.

It appears to have become a fixed mode of procedure in our American life to organize, now and again, unofficial organizations to coöperate with, to encourage and when necessary, to

criticise, the official bodies charged with some branch of public administration. By the exercise of tact and good judgment, organizations of this type may be most useful, and the experience of Philadelphia proves that the Public Education Association of that city is entitled to a high place in this class.

An English Criticism

A writer to the London *Academy* gives expression to an unfavorable view of present standards and tendencies in our American civilization, and as a consequence, has been treated to a characteristic outburst of sneers and jeers in the American press. One need not assent to all that this critic says, however, or, indeed, to anything that he says—to find food for serious reflection in what he writes. Right or wrong, his criticism will bear pondering.

Fifty years ago the American mind promised to become one of the grand intellectual forces of modern civilization. In the period of intellectual stagnation in Europe, between the decline of romanticism and the rise of evolutionism, a new school of thought was formed in America in which the ideas of the Orient were combined with those of the Western world. Emerson framed a Buddhistic view of life in which there was retained an exhilarating sense of the worth and poetry of the material universe. Whitman found in the mystic idea of the soul something that clothed flesh and matter with a fresh beauty and a fresh significance, and in the philosophic idea of evolution something that gave to individual existence a new purpose and a new grandeur. Whistler, some years later, discovered in the decorative style of Buddhistic art the principle of a new manner of painting, and Peirce recognized in the connection between thought and purpose the ground of a new system of philosophy. None of these pioneers, however, has found among his countrymen another man of genius to resume and consummate his work.

This sudden decline of American thought is the strangest of all the events of the Civil War. And in view of its effect upon the spiritual life of the nation we are sometimes inclined to doubt whether the victory of the Northern States was a just one. A race of sincere and generous liberators does not, on turning home from a glorious battlefield, dedicate its mind to low and material ends. Yet this is what the Americans seem to have done. Their culture is now a borrowed thing animated by no life of its own. Their art is becoming a reflection of French art, their literature a reflection of English literature, their learning a reflection of German learning. A velleity of taste in their women of the richer class seems to be all that maintains in their country the semblance of a high, serious, and disinterested passion for the things of the mind. And, to judge by the works commonly produced by these women, it is indeed only a semblance.

**Miss Dorothea
Beale**

On November 9 Miss Dorothea Beale, Principal of the Ladies' College, Cheltenham, died of nervous prostration. Miss Beale, like Mrs. Grey, whose death we noted last month, has been a powerful force in woman education in England thru a long lifetime. Her usefulness was widely recognized and highly honored, and she has passed away in the fullness of years, leaving a precious memory to her friends and fellow-workers.

**College Entrance
Examination
Board**

The annual meeting of the College Entrance Examination Board was held in New York on November 10, and the reports of the executive officers showed that the last year had been one of marked success and prosperity. Smith College applied for membership in the Board and was at once added to the list of members. The most important of eastern colleges that are not now members of the Board are Amherst, Bowdoin, Dartmouth, Princeton, and Yale. Nearly 2500 candidates for college admission were examined by the Board in June, 1906, and it was estimated that nearly 3000 such candidates will present themselves for examination in June, 1907.

This Board has been the most important influence yet developed in the United States for standardizing the work of secondary schools and for bringing about a normal and thoroly satisfactory relationship between secondary schools and colleges. These examinations are the joint product of secondary school and college teachers, and are almost wholly free from the criticisms to which the old style admission examinations were justly exposed. These examinations are not imposed on the schools by colleges, but are tests agreed upon by both colleges and schools for the assistance and advantage of each.

The College Entrance Examination Board is also a noteworthy object lesson in the value and effectiveness of co-operation between different educational institutions. That this coöperation is to be more important in the future than in the past is certain, and the College Entrance Examination Board may well serve as a model as to the lines along which such coöperation may be successfully planned and carried out.









